

GETTING IMMUNIZED AGAINST HPV: KNOWLEDGE OF AND ACCESS TO  
THE HPV VACCINE AMONG LATINA UNIVERSITY STUDENTS

by

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Thesis directed by Associate Professor John Brett

### ABSTRACT

The HPV vaccine was FDA approved in 2006 for women ages 9 to 26. The vaccine is 100% effective in preventing the infection of four HPVs that cause 90 percent of genital warts and 70 percent of cervical dysplasia. This thesis examines the knowledge of demographically diverse Latinas ages 19 to 26 regarding the HPV vaccine and their perceived access to the immunization. Unlike other studies which focus on the differences in knowledge and access to healthcare between Latinas and other demographic groups, this research concentrates on the variations in knowledge and perceptions among Latinas. This is an exploratory qualitative study using semi-structured open-ended interviews with 15 Latinas as the primary research method to acquire understanding and inform the scientific community of ways to increase knowledge of and access to the HPV vaccine among Hispanic women. The theories of critical medical anthropology and political economy were used to frame the results. In terms of knowledge, there was confusion concerning the purpose of Pap smears, the commonality of specific STDs, and the signs and symptoms of HPV. Many forces working at different analytical levels influenced knowledge, including the public media, socioeconomic status, education level, policies of social institutions, interactions between health care providers and patients, the educational capacity of friends and family, personal experiences, US cultural beliefs, and cultural beliefs unique to Latinas. There was a gap between

knowledge and behavior, as informants knew they should take certain precautions but did not. There was also a gap between access and knowledge as women underwent certain medical procedures without knowing the purpose. Forces that affected access to medical care include financial costs, health insurance, policies of individual health institutions and schools, the relationship between provider and patient, parental support, personal knowledge of the US medical system, language barriers, racism, and cultural beliefs among Latinas.

This abstract accurately represents the content of the candidate's thesis. I recommend its publication.

Signed

A handwritten signature in black ink, appearing to read "John Brett", written over a horizontal line.

John Brett

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## CHAPTER 1

### INTRODUCTION

The *human papillomavirus* (HPV) produces morbidity and mortality in women worldwide. HPV causes genital warts, is incurable, may involve painful treatments, and leads to several cancers, especially cervical cancer. Although deaths due to cervical cancer have declined significantly in the US population because of increased early detection through Pap smears, rates are still high among women who do not receive cervical cancer screening. Women may not obtain a Pap smear for several reasons, including poverty, cultural barriers, and a lack of knowledge of reproductive health care and the medical system (Bradley *et al.* 2004; CDC 2006a; Dailard 2006a; Markowitz *et al.* 2007).

The FDA approved HPV vaccine, Gardasil, protects against four strains of HPV. Although the vaccine is recommended for girls between the ages of 9 and 11, it has been approved by the FDA for women ages 9 to 26. This provides an opportunity for women to become immunized if they missed receiving the vaccine when they were children. Knowledge of and access to the HPV vaccine is an important issue since the immunization protects against two strains of HPV that cause genital warts and two strains that are high-risk for cervical cancer. HPV types 6 (HPV-6) and 11 (HPV-11) cause 90% of cases of anogenital warts and a portion of the cases of low-grade neoplasia. HPV type 16 (HPV-16) is the most common cause of invasive cancers of the cervix and other cancers associated with HPV, including vulva, vagina, penile, and non-melanoma skin cancer. HPV type 18 (HPV-18) is the second most common cause of cervical cancer and is the leading HPV related cause of adenocarcinoma (Garland *et al.* 2007: 1929; Markowitz *et al.*

2007). The HPV vaccine will prove to be instrumental in the decrease of genital warts and cervical cancer rates, but has only been available to the public since 2006. Therefore, public awareness of the vaccine is low, and the public is often misinformed. No research has been published that assesses women's knowledge of and access to the immunization. Data are especially lacking for Latinas in regards to HPV and cervical cancer screening. This research sheds light on some of the issues surrounding knowledge of and access to the HPV vaccine among young adult Latinas in a university setting.

The primary research aim is to describe and explain the knowledge 15 Latina university students have about the HPV vaccine. Second, Latinas' perceived access and barriers to the HPV vaccine are explicated. Knowledge and access to reproductive health care, including Pap smears, STD screenings, and condom use, is extensively explored in order to frame the results regarding the HPV vaccine. Similar barriers and facilitators may affect knowledge of and access to all of these services. Framing these results within the context of general reproductive health services is important since women may not know about the HPV vaccine simply because of its novelty. These questions are explored using in-depth qualitative research. This qualitative research involves approximately one-hour semi-structured interviews with both Latinas and key informants. The key informants were drawn from clinicians in the local Denver, Colorado area who work in women's reproductive health care and serve Latinas. These informants led to an understanding of the key issues surrounding the HPV vaccine and the attainment of reproductive health care. Those who work with Latinas on reproductive health issues in Denver and the scientific community will be informed about current knowledge of and perceived access to the HPV vaccine among the women interviewed.

## HPV and Cervical Cancer

There are over 100 types of HPV, 30 of which infect the genital area. Nearly three-quarters of North Americans between the ages of 15 and 49 have been infected with HPV at some point in their lives. About 1% of the US population has visible genital warts at any point in time. This prevalence is estimated from clinical trials (CDC 2006b; Dailard 2006b). Unfortunately, there are no data on how many individuals seek medical attention for HPV and HPV related symptoms since it is not an infection that is reported to the CDC or state health departments.

The most common cause of transmission is sexual contact (Markowitz *et al.* 2007). Therefore, the best way to prevent HPV is to refrain from sexual contact. For those who engage in sexual activity, condom use has been associated with decreased cervical cancer rates. However, condoms do not fully protect against HPV since lesions occur outside the area protected by a condom (NCI 2007). Other contraceptive forms, such as nonoxynol-9 spermicide, have been shown to increase the transmission of HPV by sensitizing the genital tract to HPV infection (Boggs 2007).

Reported incidence of HPV has been increasing steadily since 1966 from an incidence of 56,000 to an incidence of 220,000 in 2000 and 357,000 in 2005 (IMS Health 2006). Since HPV is often asymptomatic, incidence is underreported. This increase is due in part to better detection and surveillance of the virus. Previously, rates that considered the population size and structure were not available; thus, incidence may have increased because of population-wide variables. The annual burden of HPV in the US includes 1 million new cases of genital warts in women, 1.4 million cases of low-grade cervical dysplasia, 330,000 cases of high-grade cervical dysplasia, 10,966 cases of cervical cancer, and 6 billion dollars in financial costs (Giuliano 2008). A 2007 report found an overall prevalence of 26.8% among US women aged 14 to 59 years. Prevalence was highest in females ages 20 to 24 at

44.8%. In the same study, there was a statistically significant trend for prevalence to increase for every year of life from ages 14 to 24 and then to gradually decline through age 59. Age younger than 25, increased lifetime or increase in recent sexual partners, and marital status were all independently associated with HPV detection (Dunne *et al.* 2007). Still, increased number of recent sexual partners is the primary predictor of HPV infection (Dunne *et al.* 2007; Markowitz *et al.* 2007). Information on US and Colorado HPV rates according to gender, ethnicity, age group, and geography is lacking because HPV is not a reportable disease to the CDC. Physician groups, hospitals, and clinics generally do not collect information on non-reportable infections due to resource constraints. Additionally, there is not a disease specific organization, such as the American Cancer Society, that collects data on HPV.

Approximately 90% of women who are infected become HPV-negative within two years due to the gradual development of an immune response. Nonetheless, about 10% of women who have HPV develop persistent HPV infection (CDC 2006a). There are several factors associated with persistent HPV infection, including infection with oncogenic viral types, such as HPV-16 and HPV-18, older age, multiple sex partners, tobacco use, immune suppression, use of hormonal contraception, infrequent condom use, and concurrent sexually transmitted infections (Shew *et al.* 2006). Persistent HPV infection transforms cervical cells, which may lead to cancer if left untreated (CDC 2006b).

HPVs-6 and 11 cause 90% of anogenital warts, a portion of the cases of low-grade neoplasia, and occasionally respiratory papillomatosis, a potentially life-threatening condition. HPVs-6 and 11 are considered low-risk since they do not cause cervical cancer. HPV-16 is the most common cause of invasive cancer of the cervix (Garland *et al.* 2007: 1929). Oral infection of HPV-16 is strongly associated with oropharyngeal cancer with or without a history of established risk factors (D'Souza *et al.* 2007). In most studies, HPV-16 is also the most prevalent infection

(Dunne *et al.* 2007). HPV-18 is the second most common cause of cervical cancer and is the leading HPV related cause of adenocarcinoma (Garland *et al.* 2007: 1929). HPVs-16 and 18 are considered high-risk viral types. HPV is also associated with anal, vulvar, vaginal, penile, non-melanoma skin, lung, and laryngeal cancer (Baden *et al.* 2007; Giuliano 2008; Markowitz *et al.* 2007). HPV is responsible for almost all cases of cervical cancer with HPVs-16 and 18 causing 70% of cervical cancers (The FUTURE II Study Group 2007). Between 1998 and 2003, there were 17,000 cases of HPV associated invasive carcinomas every year in the U.S., including approximately 11,000 cases of cervical carcinomas and 6,000 cases of oropharyngeal carcinomas (Giuliano 2008).

The terms Pap smear, Pap test, and cervical cancer screening all refer to the Papanicolaou test. Pap tests are used to screen for abnormal cervical cells caused by HPV and cervical cancer. The Pap smear can test for infections, abnormal cervical cells, and cervical cancer. An annual Pap smear is recommended for women under 30 who have been sexually active for three years or more or who are over age 21 (NWHIC 2006). If a woman has an ambiguous Pap test, a relatively new HPV test can screen for 13 oncogenic or high-risk viral types. This test identifies viral DNA and can be used to diagnose someone with HPV before visible cervical changes occur (NCI 2007). Proven clinical treatments are not available for HPV. Genital warts and squamous intraepithelial lesions are treated with pharmaceuticals or removed through cryosurgery, loop electrosurgical excision procedure (LEEP), or conventional surgery. These procedures may cause preterm birth or infertility. In one study, 7.9% of women who had a LEEP procedure delivered a preterm birth compared to 2.5% of women who had not had a LEEP with an odds ratio of 3.5 (Samson *et al.* 2005). A hysterectomy is occasionally warranted for high-grade lesions (ACOG 2004; Markowitz *et al.* 2007; NCI 2007).

Pap smears are widely available in the US and programs funded by the National Breast and Cervical Cancer Early Detection Program offer free or low-cost

Pap tests nationwide to women in need. Planned Parenthood also offers low cost cervical cancer screening nationwide (NWHIC 2006). Still, half of all women who are diagnosed with cervical cancer in the U.S. have never had a Pap smear and another 10% have not had a Pap smear in the last five years (Owusu *et al.* 2005). Cervical cancer screening is especially lacking among women who are recent immigrants, who have a lower socioeconomic status, who are uninsured, and who do not have regular access to healthcare; therefore, cervical cancer disproportionately affects these women (Bradley *et al.* 2004; CDC 2006a; Dailard 2006a; Markowitz *et al.* 2007). Late-stage diagnosis is more prevalent and survival rates are lower among persons of a lower socioeconomic status and women who are uninsured or Medicaid insured when compared to privately insured women (Bradley *et al.* 2004).

Cervical cancer is the second most common cancer among women (The FUTURE II Study Group 2007). During 2007, an estimated 11,100 new cases of cervical cancer were diagnosed and 3,700 women died as a result in the U.S. (Markowitz *et al.* 2007). In Colorado, the cumulative lifetime risk of being diagnosed with invasive cervical cancer is 1 in 151. There were 773 cases of cervical cancer in Colorado between 1997 and 2001 and 159 cases in 2002 alone. Annual age-adjusted incidence rates per 100,000 persons were statistically elevated in Denver County compared to other Colorado counties between 1992 and 2002. The authors suggested that this was due to increased screening rates in Denver County (Finch *et al.* 2005).

Ethnic disparities in cervical cancer diagnosis and survival are well documented (Bradley *et al.* 2004). For instance, Hispanic and African-American women are 1.5 times more likely to develop cervical cancer and more likely to die as a result (The Henry J. Kaiser Family Foundation 2007). The rate of invasive cervical cancer is twice as high among Hispanic women when compared to non-Hispanic whites (Giuliano 2008; Shah *et al.* 2006). Further, Latinas tend to be

younger at the age of diagnosis and present for medical care at later stages (McMullin *et al.* 2005). In Colorado, although non-Hispanic whites account for the majority of cases of cervical cancer, rates are two-fold for Hispanics (see Table 1.1) (Finch *et al.* 2005).

**Table 1.1:** Cervical cancer in Colorado—number of cases and incidence per 100,000 by race and ethnicity<sup>1</sup>

	1997-2001		2002	
	<i>Cases</i>	<i>Rate</i>	<i>Cases</i>	<i>Rate</i>
<b>Non-Hispanic Whites</b>	580	6.8	116	6.4
<b>Hispanics</b>	169	14.0	36	12.1
<b>African-Americans</b>	24	6.3	7	9.9

1. Finch *et al.* 2005

There were 202 deaths from cervical cancer in Colorado between 1997 and 2001 and 35 deaths in 2002. As seen in Table 1.2, the 5-year relative survival rate is higher for non-Hispanic whites than Hispanics. The mortality rate for Hispanics and African-Americans was higher than the rate for non-Hispanic whites between 1997 and 2001. In 2002, the Hispanic mortality rate was almost twice that of non-Hispanic whites. Data are not available for African-Americans in each area due to ten or fewer events. Since early detection leads to better survival, the fact that invasive cervical cancer was detected later in Hispanics and African-Americans than non-Hispanic whites in Colorado in 2002 may account for the higher mortality rates. Further, early stage detection declined for Hispanic and African-Americans between 1997-2001 and 2002 (Finch *et al.* 2005).



**Table 1.2:** Cervical cancer in Colorado—number of deaths, age-adjusted mortality per 100,000, and 5-year relative survival rate

	1994-1997 <sup>1</sup>	1997-2001 <sup>2</sup>		2002 <sup>3</sup>	
	<i>5-Year Relative Survival Rate (%)</i>	<i>Deaths</i>	<i>Mortality Rate</i>	<i>Deaths</i>	<i>Mortality Rate</i>
<b>Non-Hispanic Whites</b>	71%	160	1.9	28	1.5
<b>Hispanics</b>	67%	32	3.0	7	2.9
<b>African-Americans</b>	999 <sup>3</sup>	10	3.0	999	999

1. Finch and Karp 2004
2. Finch et al. 2005
3. Indicates missing data

### The HPV Vaccine

In 2006, the FDA approved the currently available HPV vaccine, Gardasil, for women ages 9 to 26. It is an inactivated quadrivalent vaccine including the virus-like particles of four HPV strains, HPV-6, HPV-11, HPV-16, and HPV-18. The HPV vaccine is not fully effective until three rounds of the vaccine have been administered. The second dose should be administered two months after the initial vaccination and the third dose six months after the initial vaccination (CDC 2007; CDC 2006b; Markowitz *et al.* 2007). Gardasil is 100% effective for at least five years in preventing vulvar, vaginal, perineal, and perianal warts or lesions and cervical neoplasia associated with the four HPV strains covered by the immunization (CDC 2006b; Garland *et al.* 2007). As with all vaccines, there are some side effects, but they have proven to be relatively minor. Garland *et al.* (2007) demonstrated that 87% of 2,723 women who received the immunization experienced pain at the site of the injection compared to 77% of 2,732 women who received a placebo. Those experiencing serious side effects were similar in the

vaccine and placebo group, differing by only .1 percentage point. Out of 20,000,000 doses of the vaccine in an 18-month period, there were only 750 reported adverse events, consisting mostly of fainting. There were three serious events, but this was no more than expected and was similar to the number of serious adverse events from a placebo (Giuliano 2008).

Due to a historical lack of adolescent immunization implementation and typical adolescent onset of sexual activity, the CDC's Advisory Committee on Immunization Practices (ACIP) recommends that the HPV vaccination series begin at age 11 or 12 (Dailard 2006b; Markowitz *et al.* 2007). Still, catch-up immunization is recommended for women up to age 26 (Dailard 2006a). Gardasil is not recommended for pregnant women or women with moderate or severe illnesses (CDC 2007). Though the vaccine has shown to be effective in preventing precancers of the cervix, cervical cancer screening should continue after women receive the immunization since it does not protect against previously acquired HPV infections or against all types of HPV (Garland *et al.* 2007).

In both Colorado and the US, universal access to Gardasil does not exist. Widespread vaccination has proven difficult to implement in part due to its high cost, especially among individuals over age 18 in lower socioeconomic groups because they cannot afford the vaccine and are not covered by any federal programs that provide the vaccine at low or no cost (Dailard 2006a). It costs 120 dollars for one dose and 360 dollars for the three dose series. The federal health program Vaccines for Children (VFC) covers the HPV vaccine for youths under age 19 who are uninsured or Medicaid-eligible (CDC 2006b). For instance, under the Colorado VFC program the HPV vaccine is provided to disadvantaged youths in Colorado ages 9 to 18 for twelve dollars (Spence 2007). There is no public source of funding for women over the age of 18 to receive the HPV vaccine. Merck, the company that makes the vaccine, does offer private support to women who cannot afford it, but only to those women who use private physicians. However, many

disadvantaged women utilize publicly funded Title X health clinics (The Henry J. Kaiser Family Foundation 2007). Since women over the age of 18 cannot receive the vaccine free of cost through public funding, they must rely on Medicaid, private insurance companies, or pay out of pocket for the immunization. Although many insurance companies follow ACIP guidelines and cover recommended vaccines, 29% of women in the United States ages 19 to 26 were uninsured in 2004 (The Henry J. Kaiser Family Foundation 2007). Financial costs of the HPV vaccine have made it difficult for some clinics to provide the immunization. Due to the high cost of Gardasil and the low reimbursement rates from some insurance companies, it is difficult for primary care providers and pediatricians with fewer financial resources to stock the vaccine (Haber *et al.* 2007). This is especially true in rural areas with limited funds and supplies.

A vaccine that requires three shots at specific intervals also necessitates an infrastructure able to deliver immunizations in a timely manner. There is no national system to track and deliver the vaccine, which decreases access to those living in states that do not have these systems in place (Udesky 2007). This makes it difficult to ensure that individuals have access to and actually get all three shots. The problem is exacerbated when persons move across state lines (Wilson *et al.* 2005).

In the spring of 2007, the Colorado state house and senate passed a bill establishing the Cervical Cancer Immunity Program. The program encourages state health entities to connect with local health services to administer the vaccine to un- or underinsured female minors, entails a cervical cancer awareness campaign, states that the HPV vaccine will be a benefit for Medicaid recipients, and requires that certain insurance companies cover the vaccine for women ages 9 to 26 (CHHS 2007). Although the bill provides for immunizations to underinsured minors and requires Medicaid and full-coverage insurance plans to pay for the vaccine, access

to the vaccine for underinsured women over the age of 18 is not addressed (CHHS 2007).

There has been a cultural backlash against the vaccine as conservative activists suggest that the HPV vaccine will promote adolescent sexual promiscuity, prove detrimental to their abstinence only until marriage campaigns, and interfere with family sexual values (Charo 2007; Dailard 2006b). Parents have refused to get their daughters vaccinated for these reasons. Conservative watch groups, such as Judicial Watch, have published articles on their websites that claim the immunization to be extremely dangerous and even life threatening. The company that produces the vaccine, Merck, and the FDA deny these claims (Judicial Watch 2007). This cultural backlash has added shame to HPV and other sexually transmitted diseases (STDs), making it difficult to educate the US public on something the public does not want to know about (Giuliano 2008). A similar backlash has occurred in the media over condom use, as national networks, such as CBS and Fox, and local networks in Pittsburgh, Pennsylvania, have refused to run Trojan condom ads (Newman 2007).

### Latinas' and University Students' Knowledge of Reproductive Health Care

In focus groups of young Latinas living in Denver, one of the most common health concerns cited was reproductive health, including teenage pregnancy, birth control use, HIV/AIDS, and internal female problems. Among adult Latinas, AIDS, cancer, and internal female problems were listed as major health concerns (Lucero *et al.* 1996). Even though Latinas worry about reproductive health, contraception utilization rates nationwide are lower among Latinas than non-Hispanic white women. This is in part due to a lack of knowledge regarding reproductive health care. For example, one study showed that Hispanic adolescents

were less likely to have heard of condoms than non-Hispanic whites (de la Torre and Estrada 2001). This may lead to increased rates of all STDs, including HPV.

Latinas may not obtain cervical cancer screening because they do not know the root causes of cervical cancer or do not know the purpose of Pap smears. In several studies of Latinas, they focused on what the researches called “immoral” sexual behaviors, such as multiple sex partners, being on birth control, and inserting foreign items into the vagina, as the root cause of cervical cancer. Several women also named a lack of hygiene as a cause of cervical cancer. Mexican-Americans in one study who believed what they called “immoral” acts were the only causes of cervical cancer were less likely to have received a Pap smear. Many of the women felt that they did not need a Pap smear in the absence of symptoms. The women who obtained cervical cancer screening only did so under doctor’s recommendations, as part of prenatal care, or as a precursor to receiving birth control (Chavez *et al.* 1995; McMullin *et al.* 2005). Hispanic women have demonstrated lower cervical cancer and Pap smear knowledge than non-Hispanic whites and African-Americans in several studies (Breitkopf *et al.* 2005; Lindau *et al.* 2002; Pruitt *et al.* 2005). Even though three-quarters of Latinas in a California study knew that a Pap smear tests for cancer, none of the women had heard of HPV and did not know of the connection between HPV and cervical cancer (McMullin *et al.* 2005).

Knowledge and awareness of HPV and cervical cancer screening is also lacking among university students and adolescents in general (Breitkopf *et al.* 2005; Pruitt *et al.* 2005). Studies at universities throughout the US, United Kingdom, and Canada have shown knowledge regarding STDs, especially HPV, to be very low among participants (Baer *et al.* 2000; Coleman and Testa 2008; Dell *et al.* 2000; Philips *et al.* 2003; Yacobi *et al.* 1999). For example, only 13% of participants in a US university setting had heard of HPV, 5% knew that HPV caused cervical cancer, and 14% knew that Pap smears were used to detect HPV (Vail-Smith and White

1992). A large proportion of respondents in several studies have confused HPV and herpes, noting that either HPV caused herpes or that herpes, instead of HPV, resulted in genital warts (Baer *et al.* 2000; Mays *et al.* 2000; Yacobi *et al.* 1999). Even though HPV is the most common STD in the US, students rarely named it as a common STD, instead focusing on herpes or HIV (Baer *et al.* 2000; Dell *et al.* 2000). In two studies, a minority of students (15-21%) thought they were at risk for acquiring HPV (Dell *et al.* 2000; Yacobi *et al.* 1999). Over half of students in one study believed that condoms completely protect against HPV (Yacobi *et al.* 1999). In students who knew of HPV, most had learned about it through school classes or the public media (Dell *et al.* 2000). The problem with many of these studies is that they were done before the introduction of the HPV vaccine, which caused both increased public debate and knowledge.

There is also confusion of the purpose of cervical cancer screening. Ninety percent of women surveyed in a university health center knew that Pap smears test for precancerous and cancerous lesions of the cervix, but 56% also believed that it screened for ovarian cancer, 30% for Chlamydia, 29% for gonorrhea, 27% for syphilis, 6% for HIV, and 5% for uterine cancer. Since screening for STDs is a common procedure during annual exams for women of this age, they may be semantically confusing a Pap smear with their annual exam. On the other hand, women who mistakenly believe they are receiving STD screening may be given a false belief of their good health (Hasenyager 1999). In another US study, relatively few adult or adolescent women were able to identify the precise purpose of a Pap smear as screening for changes in the cervix that suggest precancerous or cancerous cells. Most women thought that a Pap test was a general screening of the reproductive system and indicated any abnormalities, including the presence of STDs. None of the respondents mentioned HPV as associated with cervical cancer screening (Mays *et al.* 2000).

## Latinas' Access to Reproductive Health Care

Cervical cancer screening rates are lower among Hispanics, poorer women, and less educated women (Breitkopf *et al.* 2005). Hispanic women are less likely to utilize Pap tests when compared to non-Hispanic African-American and white women. In a 1998 CDC survey, 83% of non-Hispanic African-American and 80% of non-Hispanic white women had received a Pap smear within the last three years as compared to 74% of Hispanic women (Shah *et al.* 2006). In a Phoenix, Arizona study, only 47% of low-income Hispanic women had received a Pap smear (Lobell 1998). Denver Latinas said they did not go to the doctor for health care unless they were delivering a child (Lucero *et al.* 1996).

In the US, socioeconomic status (SES) is associated with ethnicity as 21.5% of Hispanics lived below the poverty line compared to 10.5% of non-Hispanics whites in 2007 (US Census Bureau 2007). A 1997 report from the Center for Studying Health Systems Change found that families classified as low income were more likely than any other demographic groups to self-report decreased access to healthcare within the past three years (Andrulis 1998).

Due in part to SES, Hispanics are three times more likely to lack health insurance than non-Hispanics in the US (Glasgow *et al.* 2004). In the 2006 National Health Interview Survey (NHIS), 25.5% of women ages 18 to 24 and 22.7% of women ages 25 to 34 did not have health insurance. The greatest percentage of persons uninsured occurred within the 18 to 24 age group. Hispanics were more likely than non-Hispanics to be uninsured at the time of the interview, to have been uninsured for more than a year, and to have been uninsured for at least part of the last twelve months. Approximately one-third of Hispanics were uninsured at the time of the interview compared to 10.5% of non-Hispanic whites and 16.0% of African-Americans. A quarter of Hispanics had been without health coverage for more than a year (Cohen and Martinez 2007).

Lack of access is due to other factors as well, including knowledge of health care resources. In a 2003 study, only 34.2% of Latinas knew where to get a Pap smear compared to 80.2% of non-Latinas (Scarinci *et al.*). Among Latinas, having health insurance, a regular source of health care, and higher income and education levels increase the likelihood of Pap smear utilization. Hispanic ethnicity is also a predictor of Pap smear use even after economic barriers have been accounted for. Some of the barriers relating to ethnicity include culturally based embarrassment, beliefs about disease, and lack of knowledge about cervical cancer screening (McMullin *et al.* 2005).



## CHAPTER 2

### THEORETICAL FRAMEWORK: CRITICAL MEDICAL ANTHROPOLOGY AND ACCULTURATION

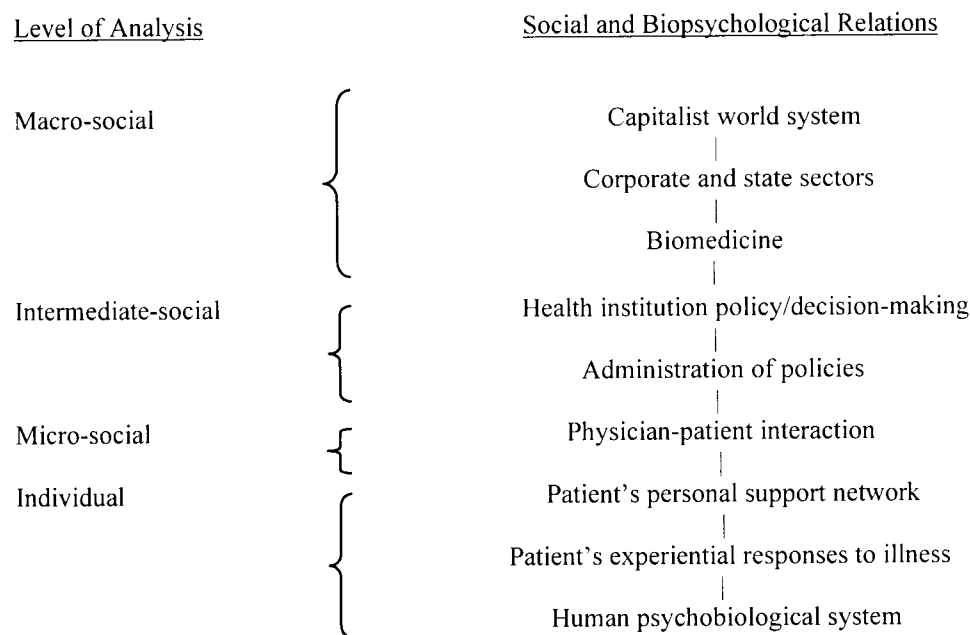
Critical medical anthropology utilizes political economy as it describes the interconnections between health concerns, individual and community understandings of illness, and social, economic, and political forces. Social factors, such as poverty, stigmatization, racism, and sexism, place individuals at a disadvantage regarding health and access to health care (Baer *et al.* 2003). Baer *et al.* (2003:4) summarize critical medical anthropology succinctly:

[T]his perspective views health issues within the context of encompassing political and economic forces that pattern human relationships; shape social behaviors; condition collective experiences; reorder local ecologies; and situate cultural meanings, including forces of institutional, national, and global scale.

Critical medical anthropology is based on the belief that social inequality and power differentials are the primary determinants of health (Singer and Clair 2003).

Although some political economists focus on macro-level forces, critical medical anthropology employs this perspective to analyze macro-micro connections (Baer *et al.* 2003). The levels of analysis are displayed in Figure 2.1, utilizing the medical system as an example. Capitalism and the expanding global market continually shape the structure of our lives; consequently, corporate and state institutions and biomedicine must be analyzed within the context of a capitalist world-system. The intermediate-social level refers to the policies formed and implemented within health institutions, such as hospitals. The

microlevel consists of interactions between patients and health care providers. Even though power is concentrated in macro-level structures, macro-level forces do not solely determine the micro-level structures and forces. Micro-level forces have the ability to influence macro-level institutions. A patient's personal support network in the individual level includes family and friends. The individual level of analysis also includes a patient's personal experiences with illness and the human psychobiological system. Cultural influences that impact values occur at the micro and individual levels (Baer *et al.* 2003). The ultimate goal of critical medical anthropology is to contextualize specific local problems within larger sociopolitical frameworks (Rylko-Bauer *et al.* 2006).



**Figure 2.1: Levels of Analysis for Critical Medical Anthropology, Adapted from Baer *et al.* 2003**

Baer *et al.* (2003) demonstrate this model using the HIV/AIDS epidemic as an example. Though AIDS is a biological phenomenon, it is the interactions

with human society and the relationships within that society that have made AIDS a pandemic. Variables that affect patterns of social relationships, such as SES and cultural values, act as inhibitors or facilitators to disease transmission. Incidence of HIV is shaped by social inequalities that begin at the macro-social level. The biggest risk for acquiring AIDS is impoverishment and being in an oppressed group. Baer *et al.* use Haiti to exemplify a country under global economic oppression with extreme internal stratification. This atmosphere creates an environment where sex exchanges for resources, and therefore diseases such as AIDS, are all too common. Instead of acknowledging the economic and social repression of Haitians, the popular hegemonic images or explanations of the 1980s blamed Haitians. This blame carried over to all at risk groups, including homosexuals and injection drug users, making AIDS a heavily stigmatized disease. This stigmatization led to anti-Haitian health policies in the US at the intermediate-social level. For HIV positive individuals, the stigmatization resulted in a “damaged sense of self.” Again, events at the individual level are not solely determined by macro forces and in fact, influence those forces. The response of the human psychobiological system to AIDS takes a toll on individual and therefore societal productivity. For every 10% increase in the prevalence of HIV, the Gross Domestic Product drops 1%, as evidence in sub-Saharan Africa. This feeds into the cycle at the higher analytic levels of SES and oppression, resulting in risky behaviors that perpetuate the epidemic (Baer *et al.* 2003).

The second concept to be utilized in this analysis is acculturation. Acculturation refers to an individual’s acceptance of another culture’s attitudes, behavioral patterns, values, and beliefs. These include the knowledge and behaviors associated with health (Gans 1997; Shah *et al.* 2006). Acculturation is seen as one aspect of the broader concept of cultural change that results from intercultural contact (Berry 2003). Two constructs are inevitably linked to acculturation, culture and ethnic identity. Culture is “the knowledge people use to

live their lives and the way in which they do so” (Handwerker 2001: 6). Ethnic identity is a multidimensional concept that refers to one’s identity as a member of an ethnic group. Ethnic identity is not fixed, but is a dynamic understanding of one’s ethnic background. The concept is modified as individuals become aware of differences among ethnic groups and begin to understand the place of their ethnic group within the larger society. Though ethnic identity changes over time in any setting, the changes that occur over time within a new culture are attributed to acculturation (Phinney 2003: 63). Acculturation is highly interrelated with available financial resources, education level, and social support (Shah *et al.* 2006; Weigers and Sherraden 2001).

The linear model of acculturation assumes that individuals follow a streamlined track from identifying with one culture to identifying with another. However, individuals may display high degrees of acculturation for some characteristics and low degrees for others. This occurs as individuals relinquish their culture in certain settings while defending it in other situations (Berry 2003; Mendoza 1989; Weigers and Sherraden 2001). Therefore, the lines between ethnic groups are blurred. Persons may choose to be part of an ethnic group or a number of ethnic groups (Vermeulen and Govers 1997). The concept of acculturation thus allows for the identification of intra- and inter-cultural variability among individuals. This cultural variability hinges on two observations: culture evolves and cultural variations reflect differences in personal experience. No one possesses a single culture, but participates in many cultures (Handwerker 2001: 9).

The linear model of acculturation places the center of change within individuals while ignoring the barriers and facilitators presented by other forces, such as the family or community (Weigers and Sherraden 2001). Acculturation occurs at both the individual and group level. People do not change in the same way, even if they are part of the same ethnic group in the same acculturative arena

(Berry 2003). Still, the vitality of an ethnic community and an individual's involvement within that community is central to acculturation. The opportunity to engage in cultural activities enhances the feeling of belonging to an ethnic identity. Phinney (2003) states that the presence or absence of a strong ethnic community is more telling of acculturation than generation. Society outside of one's ethnic community also affects acculturation as they decide how willingly they will accept those from different cultural backgrounds.

Acculturation affects both an individual's attitudes and behaviors. Attitudes consist of a person's values, preferences, and beliefs, while behaviors are the actual actions or outcomes (Berry 2003). However, the object of analysis when using acculturation as a concept is cultural values and beliefs, not personal values. Attitudes and behaviors affected by cultural values are important to understand because they are key in developing culturally appropriate interventions (Marín and Gamba 2003). There is not a one-to-one relationship between attitudes and behaviors since individuals are not always able to do what they wish or prefer to do (Berry 2003). Unfortunately, a study in the existing literature that integrates the concepts of critical medical anthropology and acculturation could not be found.

### Critical Medical Anthropology, Acculturation, and Reproductive Health

Both knowledge of and access to reproductive healthcare are situated within political-economic contexts. Politics have come to rule as to whether or not reproductive health care is taught in schools. Economic forces and anti-immigration sentiment have limited the education levels of the poor, minorities, and immigrants. The emotional aloofness of physicians within the clinical setting and a mechanistic concept of the body lead to miscommunication between

provider and patient. This is especially likely to occur if the patient is unaware of biomedical concepts. The dominant hegemonies outside of biomedicine and biomedicine itself support ideals such as self-reliance, rugged individualism, and profit-making that hampers access through a lack of universal health care. Further, this hegemony has placed emphasis on curative rather than preventive health services (Baer *et al.* 2003). Those who do not have health insurance, have low incomes, and have to face further barriers when seeking preventive health care may not do so (Lobell 1998).

In a search of the existing literature, no studies could be found that utilized a critical medical anthropology model when analyzing cervical cancer, cervical cancer screening, or the HPV vaccine. However, many studies have identified variables that fit within the model proposed by Baer *et al.* (2003). For instance, having a regular source of health care increases a patient's access to care, particularly Pap smears (Owusu *et al.* 2005). SES is a macro-level force that influences knowledge of and access to reproductive health services. Knowledge of cervical cancer screening is lower in the lowest socioeconomic groups and increases as SES increases (Breitkopf *et al.* 2005; Pick and Cooper 1997; Pruitt *et al.* 2005). Financial barriers are central in limiting access as being poor leads to inadequate health insurance and competing needs that create barriers to the utilization of health care. Public or private health insurance is critical to accessing health services, especially preventive services since they are not viewed as necessary (Andrulis 1998; Cohen and Martinez 2007; de la Torre and Estrada 2001; Owusu *et al.* 2005). However, there is no single factor that accounts for the relationship between SES and health (Krieger *et al.* 1997). This is in part due to the fact that SES is highly interrelated with education level and minority status.

Education operates at the macro-level. Higher education levels are positively associated with knowledge of HPV, cervical cancer, and Pap smears (Breitkopf *et al.* 2005; Gerhardt *et al.* 2000; Pick and Copper 1997; Pruitt *et al.*

2005; Rind 1991). In fact, Massad *et al.* (1997) demonstrated that education level was the only significant predictor of cervical cancer screening knowledge when compared to other sociodemographic variables. Low education levels lead to low income, which decreases insurance coverage and access to healthcare. Therefore, Hispanics with higher education levels have a higher probability of obtaining a Pap smear (Glasgow *et al.* 2004; Lopez and Castro 2006). In a 1991 study, higher education level was positively associated with utilization of Pap smears (Rind 1991). Education levels also affect knowledge of where to get health care. In a South African study, more than 10 years of formal education was positively associated with knowledge of where to obtain a Pap smear (Pick and Cooper 1997).

Disparities in health among minorities are often explained by differences in SES. However, researchers, such as Willie (1979) and Navarro (1991), claim that race or ethnicity and SES are not interchangeable and influence knowledge of health and access to health care in different ways. Minorities who have a high SES still experience important disadvantages in accessing health care, such as discrimination. In other words, minorities do not see as high a return for achievement of high SES as non-minorities (de la Torre and Estrada 2001; Farmer and Ferraro 2005; Horton 2004). For instance, low-income Latinas in a Memphis, Tennessee study were less likely to have heard of a Pap smear and less likely to have had a Pap smear when compared to low-income non-Latinas (Scarinci *et al.* 2003)

As with SES, education level, and minority status, religion affects reproductive health care at the macro-level. Coleman and Testa (2008) claim that religious diversity may contextualize adolescents' sexual experiences more than ethnic diversity and may lead to a better understanding of sexual beliefs and behaviors. In the United Kingdom, religious students, as opposed to non-religious students, reported lower levels of sexual health knowledge. Christian students on

average scored 2.9 points less than non-religious students on a 25-point scale. They were also more conservative in their attitudes about sex. Concerning the use of condoms during their first sexual experience, 10% of non-religious students did not use protection, while 12% of Christians did not use a condom. Christian females reported the highest prevalence of never using contraception of any kind at 55%.

At the micro-level, physician-patient interactions affect access to health care. Minorities may under-utilize preventive services due to negative experiences with a health care provider (Owusu *et al.* 2005). All Latinas in a Denver study expressed frustration with their health care providers because they were slow, overcrowded, unresponsive, and unfriendly. Specific problems faced by these women were being sent home in pain without treatment and having to see a different doctor each visit (Lucero *et al.* 1996).

The availability of knowledge regarding reproductive health care works at various levels. At the macro-level, whether the federal government supports sexual education and whether sexual education is in the public arena affects knowledge. For example, one common source of information for college women in New England was television (Baer *et al.* 2000). The policy of individual educational and health institutions to inform students or patients of reproductive health operates at the intermediate level. The majority of adolescents who knew about genital warts in two studies cited information from school settings as their source of information (Baer *et al.* 2000; Mays *et al.* 2000). In several studies, general practitioners and nurses are used as the primary source of information regarding cervical cancer screening and genital warts (Mays *et al.* 2000; Pruitt *et al.* 2005). The interaction between provider and patient at the micro-level also affects knowledge. How services, such as the HPV vaccine, are presented to women by clinicians affects their intention to receive those services (Fleisher and Posey 2006). Lastly, the support networks at the individual level may act as



educators. One study reported that Hispanics receive less information from their parents about sexuality than other adolescents (de la Torre and Estrada 2001).

At the individual level, patients' experiences influence knowledge. In one knowledge assessment, older women knew more about Pap test when compared to younger women (Breitkopf *et al.* 2005). In several studies, personal experience with HPV or abnormal Pap results increased participants' knowledge of HPV, cervical cancer, and Pap smears (Pruitt *et al.* 2005; Vail-Smith and White 1992; Yacobi *et al.* 1999). More sexually experienced students had heard of HPV and Pap smears compared to sexually inexperienced students in one study (Dell *et al.* 2000).

Researchers have employed the concept of acculturation when analyzing knowledge of and access to reproductive health care. Hispanics in the US who are less acculturated are less likely to know about cervical cancer or Pap smears (Rind 1991; Scarinci *et al.* 2003; Shah *et al.* 2006). Sexuality may be more private to Hispanics than non-Hispanic whites. The "good" Hispanic woman is not supposed to know about sex and communication regarding sex is limited. Therefore, Latinas often lack a forum to bring up sexual and reproductive health issues and questions (Ford and Norris 1988; Marín *et al.* 1988). Research in other countries has shown that women with lower levels of acculturation are less knowledgeable about cervical cancer screening (Pick and Copper 1997).

Lower acculturation levels among Hispanic women are also associated with less utilization of Pap smears (Harlan *et al.* 1991; Lobell 1998; Owusu *et al.* 2005; Shah *et al.* 2006). Individuals with low levels of acculturation experience a variety of difficulties when accessing care, including cultural barriers and lack of knowledge about the medical system (Lane 2003; Lopez and Castro 2006; Lucero *et al.* 1996; Pick and Copper 1997; Shah *et al.* 2006). One cultural barrier among Latinas that is often cited in the literature as preventing the utilization of Pap smears is embarrassment of revealing themselves to a health care provider,

especially if they are a stranger or male. For many Latinas, having *confianza*, or a trusting relationship, with a female provider is necessary. *Dignidad* (dignity) and *respeto* (respect) must also be maintained between provider and patient (de la Torre and Estrada 2001; Lucero *et al.* 1996; Scarinci *et al.* 2003). Other Latinas said fear prevented them from obtaining a Pap smear (Lobell 1998; Owusu *et al.* 2005). Familialism, a strong attachment to the family, also affects access because women will forego preventive care if they must use their resources to provide for others in the family. Further, if members of the family do not approve of certain health services, the individual is less likely to receive those services (de la Torre and Estrada 2001; Marín and Gamba 2003). Although Latina youth do not necessarily face the same language barriers as their older family members, Latinas of all ages in various settings indicate a lack of Spanish literature and Spanish-English translation in the health care setting as major health problems and barriers to cervical cancer screening (Lobell 1998; Lucero *et al.* 1996).

## CHAPTER 3

### METHODS

Setting: Auraria Campus, Denver, Colorado

Auraria Campus is located in downtown Denver, Colorado. Three educational institutions are located on the campus, including the University of Colorado Denver (UCD), Metropolitan State College of Denver (MSCD), and the Community College of Denver (CCD). Auraria Campus is the largest in Colorado, and 27% of all students are minorities. UCD is part of the University of Colorado system and has nearly 12,000 students currently enrolled. Resident tuition for a 15 credit hour undergraduate semester ranges from \$2,527 to \$2,592. The median age of students is 27, and 20% of students are ethnic minorities (UCD 2008). UCD serves the lowest percentage of ethnic minorities on campus and is the most expensive school. MSCD is a four-year college with an annual attendance of approximately 19,320 students. Resident tuition for an undergraduate semester is \$1,517. The median age of students is 23, and 24% are ethnic minorities (MSCD 2008). CCD is a two-year community college with a 2006-2007 school year enrollment of 13,373 students. Resident tuition for a semester is \$1,401. As with UCD, the average age of students is 27. Over half of the students (57%) are ethnic minorities. With 33.8% of students self-identifying as Hispanic or Latino, CCD is the only college in the Denver metro-area federally recognized as a Hispanic Serving Institution (CCD 2008). CCD serves the largest percentage of Latino students on campus and is the least expensive school.

Denver is the largest metropolitan city in a 600-mile radius with a population over half a million. Hispanics comprise 12.5% of the population in the

US, 7.4% of that total being of Mexican origin (Ramirez 2004). In Denver County, 31.7% of the population is Hispanic, 68.7% being of Mexican origin (Colorado State Demography Office 2008). In 2006, per capita personal income was \$36,714 in the US. In the Denver metro-area, personal income reached \$44,691, ranking 18<sup>th</sup> for income in metropolitan statistical areas in the US (BEA 2008). However, 19.9% of Hispanics lived below the federal poverty line in Denver County in 2000 compared to 10.6% of the total population and 6.6% of non-Hispanic whites (Colorado State Demography Office 2008).

### Research Design

The overarching design of this research is an inductive and exploratory examination of Latina's access to and knowledge of the HPV vaccine and reproductive health care. Inductive and exploratory methods answer the "why, how, and under what circumstances" questions that arise instead of the "what and how many" aspects of research (Ulin *et al.* 2002). Since little information has been published regarding this topic, an existing framework to explain the results is not available. Therefore, inductive analysis was used to discover themes and interrelationships that emerged directly from the data. The research was started without specifying hypotheses in order to ground the results in the data rather than relying on prior assumptions (Patton 2002). All assumptions, of course, cannot be eliminated. Reflexivity is thus critical to lessen the impact of researcher bias. Exploratory research analyzes events in light of cultural, social, political, and physical environments in which those events occur. The process of contextualization characterizes inductive and exploratory research as ultimately holistic (Ulin *et al.* 2002).

The goal of this study is to produce an in-depth qualitative analysis of Latinas' knowledge of and access to the HPV vaccine in Denver. In-depth qualitative studies are an attempt to comprehend the social world using the self as the instrument of knowledge. Current in-depth qualitative studies exemplify Geertz's "thick description" as they produce rich, detailed, and contextual accounts of cultural phenomena (Ortner 1995). Qualitative research focuses on the complex relations between personal and social meanings, individual and cultural practices, and the environment or context (Ulin *et al.* 2002). Qualitative methods are a strong source of grounded theory, which emerges from inductive and exploratory data. Although qualitative methods do not offer the generalizability of quantitative designs, they have the advantage of allowing in-depth and detailed exploration of topics (Patton 2002). This is especially important for research dealing with sexual and reproductive health since individuals make decisions that are intricately conditioned by their culture, structural restraints, and membership to various social groups (Ulin *et al.* 2002).

Semi-structured open-ended interviews were used to explore Latinas' knowledge of and access to reproductive health care at an in-depth level. Even though a guide with specific questions focused the interview and took advantage of the limited time of the participant, flexibility was allowed and topics were discussed if they were pertinent to the specific aims (Patton 2002). Not only did the interviews lead to detailed and in-depth data, but allowed privacy when discussing intimate experiences, such as having a sexually transmitted disease (Ulin *et al.* 2002).

A number of studies have used multivariate statistical analysis to determine factors that influence knowledge of HPV, cervical cancer, and knowledge of and access to cervical cancer screening (e.g. Baer *et al.* 2000; Breitkopf *et al.* 2005; Dell *et al.* 2000; Gerhardt *et al.* 2000; Hasenyager 1999; Lindau *et al.* 2002; Lobell 1998; Massad *et al.* 1997; Philips *et al.* 2003; Pruit *et*

*al.* 2005; Scarinci *et al.* 2003; Yacobi *et al.* 1999). However, this research fails to gain an in-depth understanding of why knowledge and access vary among individuals with different experiences. Other studies have used qualitative methods to investigate knowledge of HPV, cervical cancer, and cervical cancer screening (e.g. Chavez *et al.* 1995; Mays *et al.* 2000; McMullin *et al.* 2005), but none employ these methods to examine access to Pap smears or the HPV vaccine.

### Data Collection

Four key informants who are clinicians were interviewed from the Denver metro area. The informants were recruited by calling or visiting their places of employment. A semi-structured interview format was utilized to make the most of the limited time these clinicians had to offer. See Appendix B for a full interview guide. The key informants were from the Auraria Health Center, Denver Health, Salud Clinic, and Planned Parenthood. All work with Latinas and focus on women's reproductive health or family planning. Clinicians from Denver Health and Salud Clinic were chosen because they have experience working with the Latino population. From this familiarity, a general insight into Latinas' knowledge of and access to reproductive healthcare and the HPV vaccine was ascertained. A clinician from the health clinic on Auraria campus was also interviewed. Since students were interviewed on campus, this informant gave a broad idea of the reproductive health concerns for students, in particular HPV, and any issues that are distinctive to the Latina population. After conducting interviews with all of the students in the study, a clinician from Planned Parenthood was recruited because the majority of students listed Planned Parenthood as a valuable source of information and reproductive health care. Through this purposive sampling, a variety of clinicians' viewpoints concerning

Latinas and reproductive health were elicited. Table 3.1 shows the categorization of informants.

Fifteen Latinas ages 19 to 26 who go to or went to school at Auraria campus were interviewed. One non-Latina was also interviewed. Although she indentified as Latina prior to the interview, during the conversation it was made evident that she was second-generation Iranian. Her interview was included because she had a similar experience to the other women who participated in the study. Latinas were recruited on Auraria Campus from UCD, MSCD, and CCD. Flyers with an e-mail address were hung around campus. Flyers were also sent to all student organizations on campus, including Latina sororities. The flyer was placed in all student newspapers, both in print and online. Then, all instructors on campus were contacted and participants were recruited in over twenty classes. Finally, business cards with contact information were passed out on campus. In interviews, participants were asked if they knew other women who would be interested in voluntarily participating. Informants were given a business card so they could offer information about the study to whoever they thought was interested in participating. This method is snowball sampling. Fourteen of the women were current students and two were recent alumni. Latinas were interviewed in particular because a lot is known about the differences in access to healthcare *between* Hispanics and other demographic groups, but there is less knowledge of differences *among* Hispanics (Lopez and Castro 2006). All women were either bilingual or English only speakers. Females below the age of 19 were not included due to the issues of obtaining consent from minors. Further, those under the age of 19 are included under different federal vaccination programs for which 19 year olds are not eligible. Therefore, females under the age of 19 have inexpensive access to the vaccine while those over 18 do not. Women over the age of 26 were not included because the vaccine has not been approved for that age group. A semi-structured interview guide was used to focus the conversation

on knowledge of reproductive healthcare in general, cervical cancer, and HPV. Perceived access to healthcare was also discussed. The questions were drawn from the 2007 National Health Interview Survey (NHIS 2007). Lastly, informants' ethnicity, religious background, education, and socioeconomic status were elicited. In order to assess acculturation, several questions regarding ethnic identification, language use, generation, and time in the US were asked. These questions were drawn from a Marín *et al.* survey (1987). See Appendix C for a full interview guide.

**Table 3.1:** Subject populations

<i>Type of Participant</i>	<i>Key Informant</i>	<i>Auraria Campus Student</i>
Number of participants	4	16
Age specifications	None	19-26
Location of recruitment	Health Center at Auraria, Denver Health, Salud Clinic, and Planned Parenthood	Auraria campus
Question guide reference	Appendix B	Appendix C

The principal investigator conducted all interviews. Interviews lasted from forty minutes to over an hour. For data, transcriptions of the audiotapes from interviewing along with field notes from interviews were relied upon. Audio taping is essential because it captures informants' ideas in their own words (Belgrave *et al.* 2002). Two of the key informants wanted to be interviewed but not audio taped. Therefore, extensive field notes were used as the data for these interviews. Field notes are useful during interviews to formulate ideas and questions for later discussions. Notes also aid in the emergence of codes during the interpretation of transcripts and serve as a backup in case of faulty taping (Paton 2002).



After all data were collected, analyzed, interpreted, and summarized in the preliminary findings, a “member check” was orchestrated where the findings were presented for critique and clarification to a portion all of the interviewees. A “member check” offers analytical triangulation as the fairness, accuracy, completeness, and perceived validity of the analysis is evaluated through participants’ comments (Patton 2002). For Auraria participants, 11 informants who consented to being contacted after the interview were presented the findings. Students were individually contacted to maintain confidentiality and because a community presentation for all of Auraria campus would be extremely difficult to organize. Participants were contacted twice by email and once by phone. One woman did not have a valid email address or phone number. Three participants responded with comments. A preliminary summary of the results was also given to all of the key informants. Results were sent via email or fax. No key informants commented on the results.

### Data Analysis

Tape-recorded interviews and field notes were transcribed into a word processing software program. All material was then transferred into ATLAS-ti (Muhr 2000), a computer program that aids in the organization and coding of qualitative data. Variables and concepts from other studies that proved relevant for these data and grounded theory were used to develop a coding scheme. The codes initially drawn from other research are shown in Table 3.2, along with the location and citation of that research.

**Table 3.2:** Codes derived from the existing literature

<i>Code</i>	<i>Location of Study</i>	<i>Citation</i>
Acculturation Level	Phoenix, Arizona	Lopez and Castro 2006
	Denver, Colorado	Lucero <i>et al.</i> 1996
	Denton, Texas	Owusu <i>et al.</i> 2005
	Memphis, Tennessee	Scarinci <i>et al.</i> 2003
	United States	Shah <i>et al.</i> 2006
Age	Galveston, Texas	Breitkopf <i>et al.</i> 2005
Education Level	Galveston, Texas	Breitkopf <i>et al.</i> 2005
	Cincinnati, Ohio	Gerhardt <i>et al.</i> 2000
	Phoenix, Arizona	Lopez and Castro 2006
	Houston, Texas	Pruitt <i>et al.</i> 2005
	United States	Rind 1991
Personal Experience with Health Care	Denver, Colorado	Lucero <i>et al.</i> 1996
	Denton, Texas	Owusu <i>et al.</i> 2005
Religion	United Kingdom	Coleman and Testa 2008
Socioeconomic Status	Galveston, Texas	Breitkopf <i>et al.</i> 2005
	Denton, Texas	Owusu <i>et al.</i> 2005
	South Africa	Pick and Copper 1997
	Houston, Texas	Pruitt <i>et al.</i> 2005

Following the grounded theory approach, open-coding was performed to derive and examine concepts found within the data. The goal of coding is to give a consistent whole picture view of the topic when amalgamated (Patton 2002). Codes displayed internal homogeneity and mutual exclusivity. The coding-scheme was finalized when further categories merely led to redundancy. The full list of codes that were eventually utilized are shown in Table 3.3. After all documents were coded, memos helped in the organization of themes and theories that pertained to particular codes throughout the interviews.

**Table 3.3:** Full list of codes

Access to Health Care	Demographics Religion	Knowledge Religion
Access Culture	Demographics SES	Knowledge SES
Access Doctor	Information on STDs	Knowledge TV
Access Education	Intention to Get HPV Vaccine	Knowledge of HPV
Access Family	Knowledge Culture	Knowledge of Reproductive Health
Access Finance	Knowledge Doctor	Knowledge of STDs
Access Racism	Knowledge Education	Language
Access Source of Health Care	Knowledge Family	Most Common STDs
Access Time	Knowledge Friends	Perceived Risk of STDs
Demographics Age	Knowledge Internet	Profession
Demographics Education	Knowledge Personal Experience	Rating of Health
Demographics Ethnicity		

## CHAPTER 4

### KNOWLEDGE OF REPRODUCTIVE HEALTH AND HPV

#### Demographic Characteristics of Participants

The age of participants ranged from 19 to 26, with a mean age of 21.5 years. As seen in Table 4.1, the majority of participants were born in the US. The birthplaces of parents and grandparents and the generation of the participants are also given. When asked their ethnicity, four students each considered themselves Hispanic, Latina, or Mexican. The students were asked with which culture they identified the most. Half said they identified with their Mexican-American heritage. Two women identified most with being Hispanic and not Mexican-American because they thought being Mexican-American signified a struggle with racism and poverty, and they did not experience those things. The woman who identified as American said she did so because she lived in a predominantly non-Hispanic white neighborhood. Only two of the participants did not speak Spanish. However, one of those students was Iranian and spoke Farsi fluently. Of the 14 Spanish speakers, four spoke some Spanish and the rest spoke Spanish with friends and family. One student said she rarely spoke English since she also used Spanish at work. Twelve participants said they practiced some form of Roman Catholicism and two students were evangelist Christians. In the rest of the analysis, Latinas will refer to women with Mexican, Latin American, or Spanish heritage. Mexican-Americans will refer only to those women who have Mexican heritage. The term Mexican immigrants will include persons who immigrated to the US from Mexico.

**Table 4.1:** Measurements of ethnicity

<i>Participants' Birthplace</i>	<b>Number of Participants</b>
Denver	8
Colorado, outside of Denver	3
US, outside of Colorado	3
Mexico	2
<i>Parents' Birthplace</i>	
US	8
Mexico	6
Peru	1
Iran	1
<i>Grandparent's Birthplace</i>	
Mexico	6
Mexico and US	4
US	3
Peru	1
Spain	1
Iran	1
<i>Generation</i>	
1	2
2	6
3	5
>3	3
<i>Ethnicity</i>	
Hispanic	4
Latina	4
Mexican	4
Mexican-American	3
Iranian-American	1
<i>Cultural Identification</i>	
Mexican-American	8
Hispanic	3
American	1
Latina	1
Mexican	1
Peruvian-American	1
Iranian-American	1

Freshmen through seniors, graduate students, and alumni were included in the study. One participant went to CCD, four went to MSCD, and eleven attended UCD. All students but one went to school full-time. In terms of areas of academic interest, 11 of the 16 participants were majoring in Spanish or had a focus on Latin American culture.

SES was measured using a number of variables relating to the students and their parents. All students were employed. The six participants who worked full time earned between \$12,500 and \$45,000 a year, with a mean annual income of \$29,333. This is above the mean income of \$26,548 for individuals in the metro Denver area and almost twice the mean income of \$12,302 for Hispanic individuals (US Census Bureau 2008). The participants working part-time earned between \$6,000 and \$14,000 a year, with a mean annual income of \$8,690. The education level of parents ranged from elementary school to a PhD. Incomes of both parents combined ranged from \$30,000 to \$220,000, with a mean annual income of \$95,000. This is below the mean income of \$104,257 for Denver families with two working parents (US Census Bureau 2008).

The only demographics recorded for the key informants were their place of employment and job title. One key informant each was employed at the Auraria Health Center, Denver Health, Planned Parenthood, and Salud Clinic. Two participants were women's health care nurse practitioners, one was a general nurse practitioner, and one participant was a physician.

### Knowledge of Reproductive Health

The participants were asked about their knowledge of cervical cancer screening because both Pap smears and the HPV vaccine are used as tools for the prevention of invasive cervical cancer. Since the HPV vaccine is relatively new, women may not know about it simply due to that reason. Examining their knowledge of Pap smears thus illuminates further barriers and facilitators to knowledge relating to reproductive health issues. Further, the similarity of these procedures suggests that similar forces would affect knowledge of each. Knowledge of contraception was also ascertained for this reason. Additionally,

even though condom use does not prohibit the transmission of HPV, it does lessen the chances of contracting HPV.

There was confusion among the participants on the purpose of Pap smears. Over half of informants thought the Pap smear was used to assess the health of the whole reproductive system, including the vagina, cervix, and uterus, or that Pap smears were used to test for all STDs. These statements exemplify what most participants thought what was the purpose of a Pap smear: “I just know they test for any irregularities that you have in your body for women” and “I thought it just tested for all STDs, I didn’t know it was specifically for HPV.” Three women did identify the purpose of the Pap smear correctly. These women had extensive contact with reproductive health clinicians because one had been diagnosed with HPV, one was interested in working in women’s reproductive health, and one had delivered a child.

Participants were asked about their knowledge of contraception. Since there is often a gap between knowledge and behavior, practice patterns regarding contraception were also discussed. Almost all of the participants knew the importance of condoms and of protecting yourself in sexual situations. Still, even though they knew they should use condoms, many women did not. The most frequent reason named for not using condoms was that they were in a long-term relationship and did not worry as much about protection. Several women also said they did not use condoms because they were uncomfortable. As one woman put it, “I don’t think anybody really likes condoms.” One Mexican-American said you really have to experiment with condoms to make them bearable, “it took a while to realize you had to try different kinds of condoms, to figure out which one worked best for you and your partner.”

Almost a third of participants knew that condoms are not 100% effective and may not protect against all STDs. Unfortunately, one woman learned this the hard way when she contracted HPV even though she was using condoms. This

made her feel powerless in preventing HPV, until the vaccine came onto the market. After another woman learned that she and her boyfriend had HPV and herpes, she was not proactive in using condoms because she knew they did not fully protect against the infections. One woman was discouraged when she learned she had herpes and that condoms would not prevent transmission. This made her feel like sex itself was a huge risk for her.

All participants knew about hormonal contraception. No women in the study had moral objections to birth control. Almost two-thirds of participants had used or were currently using daily hormonal contraception, such as oral contraception or the NuvaRing. The experiences the women had with this type of birth control varied. A majority of women loved their contraception and did not want to change anything. In the words of one woman, “there’s no side effects for me at all and it works absolutely perfect and I couldn’t ask for a better thing than that.” The women who liked their birth control did not suffer any of the side effects cited by others, such as weight gain or headaches. Their contraception also had benefits, such as lessening the affects of premenstrual syndrome and decreasing the size of ovarian cysts. Several women also had used the morning after pill without any problems. Still, a few women had negative experiences when using birth control. One woman had severe headaches while she was on the pill and they went away once she stopped use. One woman felt like oral contraception made her “fat and depressed.”

### Knowledge of Sexually Transmitted Diseases

Knowledge of STDs in general was examined since the discourses surrounding all STDs and HPV are similar. Half of the participants knew about



basic reproductive health, especially their own health, but had never learned about specific STDs. They would name common or harmful STDs, such as Chlamydia or HIV, but did not know anything beyond the name. A quarter of participants divided STDs into two groups: those that are curable and those that are only treatable. They talked about curable diseases in similar terms as one would talk about a sinus infection. You simply take a week of antibiotics and the infection is gone. For STDs that are only treatable, they talked about it as though it was a chronic illness or something to be managed through more intensive health care.

Both clinicians and students were asked which STDs they thought were the most common. All clinicians agreed that the most common STDs they diagnosed were Chlamydia and HPV, followed closely by herpes. Although they did not see gonorrhea that often, it was more common than hepatitis C, HIV, or syphilis. Overall, students thought that gonorrhea was the most common STD, followed by Chlamydia and herpes. Only three participants identified HPV as a common STD. Two of the women who identified it as common had been diagnosed with HPV. Several women said they remembered learning about condoms, HIV, Chlamydia, and gonorrhea in sexual education classes, but not about HPV. A few women had no idea which STDs were more common.

Participants were asked to name the STDs that they were most afraid of or thought were the most dangerous. Generally, incurable STDs, such as herpes and genital warts, were referenced. Only one woman referenced HPV specifically because she was diagnosed with it. However, several women named gonorrhea and Chlamydia because they had friends who were diagnosed with these. Women had mixed feelings on HIV. Only a few named it as the most dangerous sexually transmitted infection. Others said that HIV was not a concern because they had never known anyone with it. In the words of a Peruvian-American, "AIDS seems, I think, not just to me, but in general to a lot of people like some kind of invisible or magical, mystical entity that doesn't really exist in the United States."

Participants were also asked their biggest fear in contracting an STD. Most women said the effect an infection would have on their overall health. Others feared that they would become infertile. One woman said not knowing she had an STD would be the scariest thing to her because she knew that many STDs are asymptomatic.

The vast majority of participants knew that STDs could be transmitted through blood transference and various sexual activities, including vaginal sex, oral sex, and genital rubbing. Again, all but two women cited the importance of condoms in preventing the transmission of STDs. Almost half of women referred to what they called “moral” behaviors and choices as aiding in the transmission of STDs. Being promiscuous and not using condoms was seen as risky.

Promiscuous was defined in a variety of ways, but all definitions contained the concept of a person having multiple sex partners. This woman’s answer exemplifies a common response to what behaviors put one most at risk for contracting an STD, “not using protection, definitely, and having multiple sex partners and not using condoms.” However, one Hispanic woman thought that having multiple sex partners was risky even if condoms were used,

I think the riskiest behavior is, um, promiscuous sex, absolutely. If you’re going out to the bar every night and you’re hooking up with a different guy every night, whether or not you’re using protection, like you don’t know all the people that that person has slept with.

A variety of labels were given to define women who have multiple sex partners, such as “skank,” “stupid,” and “whorish.” Additionally, several women thought that drinking alcohol and going to bars led to inappropriate and unsafe sexual relations. For instance, when asked what behaviors put you at risk for getting STDs, one Mexican-American said “oh, getting drunk...I think drinking’s probably the most common risk.”

STD screening has become a common experience for most young people. The majority of women who were sexually active had received some kind of STD

screening. The clinicians at both Denver Health and Planned Parenthood said that most people coming in for screening are worried that they have an STD, but few have physical manifestations. However, of the participants in the study who had an STD, all were diagnosed when they went to a clinic with physical symptoms of the infection. The frequency with which the women in this study requested screening from their health care providers was directly linked to their perceived risk. If a woman was in a long-term relationship or not sexually active at the time, she was screened less often or not at all. If they became more sexually active, they tended to obtain STD screening more often. When this Mexican-American was asked how often she was screened for STDs, she responded, “recently more often because of the fact I’m more sexually active, but prior to that, honestly not often because I was with one partner in a monogamous relationship.” Like the confusion over the purpose of a Pap smear, some women were confused with which screening procedure tested for what and which infections they needed to be screened for and how often. A few women thought that if they had one of the various screening procedures done, then they had been screened for all STDs.

When asked what they would do if they ever got an STD, the majority of participants said they would seek treatment and tell their partners. This quote exemplifies the steps women said they would take if they found out they had an STD, “I suppose I’d get treated obviously first and then, um, commence the uncomfortable but necessary process of contacting partners.” However, one Mexican-American was not sure if partner notification was important. When asked if she would tell her partner that she had an STD, she said, “It depends on what the STD is and how it can be transmitted and if a man can catch it and what the risks are for him, but I don’t know.”

## Knowledge of HPV and the HPV Vaccine

The key informants were asked about their experience treating HPV. The clinicians at Auraria Health Center, Salud Clinic, and Planned Parenthood said they diagnosed HPV more in women between the ages of 18 and 25. At Denver Health, they found a HPV prevalence rate of 37% in a recent study of 9,672 women who were clients at the Denver STD clinic, family planning clinic, or one of the primary care clinics. The Planned Parenthood clinician said that she sees one to three cases of genital warts a day and in the month previous to the interview, there had been 47 women diagnosed with HPV at that clinic. She said they do about 10 to 15 LEEP procedures a month to remove lesions caused by HPV. Although the initial LEEP generally does not have long-term side affect, if a second LEEP is required, it can affect the woman when she is pregnant. Cervical cancer occurred mostly in older women, though the women's health nurse practitioner at the Auraria Health Center had seen a few younger women with localized cervical cancer in the previous year.

The clinician at Salud Clinic said that most of her patients do not know much about HPV or vaccines in general, regardless of ethnicity. She reported that most women had heard the name HPV from the recent public discussion and commercials concerning the HPV vaccine. However, there was a great deal of confusion about what HPV was and how it relates to genital warts and cervical cancer.

Among Latina participants, there was a mix-up between HPV and herpes. Several participants thought herpes caused genital warts instead of HPV. This is probably due to the fact that herpes has similar symptoms to HPV with the development of blisters. Herpes is also considered a treatable but not curable disease, like HPV. Two women thought HPV was a form of herpes, as did

another woman before she was diagnosed with HPV. Other women separated genital warts from HPV, thinking they were different diseases. A few participants were not sure if HPV was related to cervical cancer. A Mexican immigrant said she knew HPV caused cervical cancer but not warts because in the HPV vaccine commercials, they correlate HPV with cervical cancer but not warts. A Mexican-American thought that both HPV and cervical cancer were hereditary and non-communicable. One informant also confused the hepatitis C vaccine with the HPV vaccine. Several women had never heard of HPV. Of the women who had HPV, one did not know what HPV was before she tested positive for it. On the other hand, two participants were quite knowledgeable about HPV. They knew that it was common, the symptoms, how it was transmitted, and treated. One of those women knew about the infection because she had had it, the other was focusing on infectious diseases in her academic studies.

Half of participants did not know anything about cervical cancer. Of the women who did know what cervical cancer was, the majority were unsure how HPV caused cervical cancer. Most women knew that cervical cancer had serious consequences, including death. However, this came from their knowledge about cancer in general. Only two Mexican-Americans explicitly explained the consequences of cervical cancer, including infertility, having to have a biopsy, LEEP, possibly having a hysterectomy, and death. Both of these women had HPV and one had undergone a biopsy and LEEP.

The majority of women interviewed had heard of the HPV vaccine. However, almost two-thirds of the women who had heard about the vaccine only knew that it existed and nothing more. This is a common response among participants when asked what they knew about HPV, "It's just human papillomavirus virus and there's shot, basically what's in the commercial and that's about it." Several women had heard nothing about the HPV vaccine and did not learn about it until they came to the interview. They were not sure if

they were interested in getting the vaccine since they knew nothing about it. Six women had heard about the vaccine and wanted to look into getting immunized. A few women had already been immunized. Of the four women who were in the process of taking the HPV vaccine series, only one understood what the vaccine was for. The other participants knew it protected against some sort of STD that may cause some cancer, but they did not know any of the particulars. Two Mexican-Americans had heard of the vaccine, but were not interested in getting it because they did not think they were at risk of getting HPV.

### Macro-Social Level Influences on Knowledge

At the top tier of the Baer *et al.* (2003) model, macro-social level influences shape the discourses in society and therefore the knowledge among the general population. One major source of discourse is the public media. This includes information presented in popular shows, knowledge available through the internet, and ad-campaigns on television and radio. The discourse surrounding the HPV vaccine in the public media has been influenced by both the negative stigma of STDs in US culture and the abstinence-only sexual education movement. People in the community have expressed concern that a vaccine that protects against an STD will encourage promiscuity in young girls. No key informants have experienced this feeling in their clinics since people are willingly coming in for reproductive health care, but they have heard this sentiment within their community. The clinician from Denver Health said that she had not had anyone refuse the vaccine, but she had heard from other physicians that they had people refusing the vaccine due to what she termed “moral” concerns. The Salud Clinic clinician thought that the touting of the HPV vaccine as the “promiscuity

vaccine” in the popular press had decreased the likelihood that insurance companies would cover the vaccine.

Almost half of the women in this study learned about the HPV vaccine on popular television and radio shows, including ABC’s “Private Practice” and MTV’s “True Life.” The vast amount of information available on the internet led to increased knowledge among participants because they were able to search the internet when they had a question or even the slightest curiosity. Almost half of the women frequently used the internet to search for information about health in general and reproductive health, Google being the primary tool they used. As an Iranian-American woman put it, “I don’t know, I’m a Google freak.”

Direct to consumer advertising for vaccines is contextualized within the power of the media and the financial motivations of biomedical corporations. The commercials for Merck’s Gardasil HPV vaccine are a prime of example of direct to consumer advertising. Two clinicians said that women often come in asking about the HPV vaccine because they have seen the Gardasil commercials. Just over half of the women in the study had seen the Gardasil commercials. Four women only knew about the vaccine because of the commercials. Although the public media inserts a multitude of information into our lives, the important information concerning health often gets lost among the trivia. Therefore, there is still a lack of knowledge about preventive screening procedures in the general population. The clinician from Planned Parenthood said women do not come in for Pap smears because they often do not know that they need to get them.

Beliefs that repeatedly occur and are reinforced in a culture affect knowledge of certain topics by shaping the discourse. The negative stigma of STDs and sex hampers communication. When one of the women was diagnosed with HPV, she was surprised to hear that one of her friends also had HPV. The friends had never talked about STDs because of the embarrassment attached to the topic. Another informant who was diagnosed with herpes said she had negative

ideas about STDs before she was diagnosed with one. She thought people who had them were dirty or stupid and remembers making fun of people who had STDs with her friends. She realized that she had to take a different perspective on STDs so she did not end up hating herself. When asked where she got her negative ideas about STDs, she said from friends, sexual education, family, and society in general, "I just think it's like the societal view of STDs that you know you get it for a reason, maybe you're being a sinner or you know whatever it is." Although she did not have a negative stigma of STDs since she knows they are common, a Mexican-American participant thought people felt uncomfortable discussing STDs because they are associated with sex. Several women said if they contracted an STD, they would not tell anyone but their partner because they would be embarrassed about having an STD and would feel that they were labeled negatively. A Mexican immigrant said she had been taught that STDs are something to be embarrassed about and scared of, "once you, if you have it, you're categorized and you're kind of shunned from the community, the community and everybody else and you're this person with a disease." One woman who had herpes knew she had to tell partners about her infection, but feared doing so because she felt like "nobody's going to want me, I'm diseased."

The notion that premarital sex is a negative behavior also hampers communication about reproductive health care. The Salud Clinic health care provider thought that the negative stigma associated with premarital sex was one of the biggest barriers to Latinas receiving reproductive health care. Although no participants said they thought negatively of women who had premarital sex, the vast majority had been taught by their parents and other family members that premarital sex was wrong and a sin within Catholicism. Parents assume their children will not have premarital sex because they have told them not to. One Mexican-American saw this as a huge mistake on the part of parents. She thought



that parents should be the primary source of knowledge regarding reproductive health care.

Poverty and decreased education level are social forces that place individuals at a disadvantage for learning healthy behaviors. Although no students talked about SES or education level and its affects on knowledge directly, clinicians did discuss it. The nurse practitioner at the Auraria Health Center said that very young women who come into the clinic in their first few semesters of college are much less knowledgeable about the basics of reproductive health care than older women who have been in school for a few years. The clinician from Salud Clinic said that the higher the socioeconomic status of the client, the more they asked about health because they have more access to information through the media and understand health related concepts more clearly. She said that women with lower education levels have trouble understanding information in the media or in pamphlets. For example, the pamphlet on the HPV vaccine is targeted to persons of higher SES with high education levels since it uses very technical language and portrays wealthy families. At Planned Parenthood, the women's health nurse practitioner said those with a lower SES can be frustrating to work with because they do not have a good base of knowledge and start having sex at an earlier age. Poverty and education levels are interrelated as those in poverty have a higher rate of dropping out of high school; therefore, they do not learn about reproductive health in school. She thinks poverty is the biggest predictor of having an STD. She also said that higher education levels cause women to be more in control of their health care in general because they know recommendations for screening. They are thus more likely to come in for preventive care.

SES was measured in this study by students' education level, occupation, and income. The students' parents' education level, occupation, and income were also gathered. Though the association between students' SES and their

knowledge was not quantified, some patterns in these data did appear relating SES to knowledge of reproductive health care. The women who knew the most about reproductive health, STDs, and HPV tended to be older, had more years of education, and had higher incomes. Their parents tended to make more money and had higher education levels. The women who had less knowledge tended to be younger, had fewer years of education, and made the lowest salaries in the group. Three of the four women who were least knowledgeable about this subject had parents who had the lowest salaries and education levels, with at least one parent not having had any high school.

The discrepancy between the US and Mexican economic and medical systems creates a lack of knowledge about preventive health services in immigrants and their children. Every Mexican immigrant and every Mexican-American's parents who were immigrants in this study were from rural Mexico. Compared to rural Mexico, screening services are widely available in the US. With this availability comes knowledge of screening guidelines and recommendations for screening by health care providers. The nurse practitioner from Salud Clinic said that if Latinas are immigrants and there were no screening guidelines or recommendations for Pap smears or vaccinations in their origin country, they will not seek care in the US. This is because they do not know the importance of preventive services. One second generation Mexican-American and a Mexican immigrant said their mothers did not know to get Pap smears because it was not a common practice in the small towns they grew up in Mexico. Two second generation Mexican-Americans said that their cousins who are still in Mexico often have children young because they do not know about birth control and have no place in their small town to get condoms or other contraception.

## Intermediate-Social Level Influences on Knowledge

Intermediate-social forces include policies of social institutions and the administration of those policies. For instance, as noted by the Salud Clinic provider who once educated within schools, the policy of the George W. Bush administration to advocate abstinence-only sexual education has led to guidelines within individual schools to stop comprehensive sexual education. Several clinicians complained that they were no longer able to do mass sexual education in schools because the schools had policies against comprehensive sexual education. Planned Parenthood does educate in schools when allowed and presented in about 16 Denver Public Schools high schools last year. Sexual education presented in middle or high school was an important source of information for participants. Over two-thirds of women had sexual education in their schools. However, three of these women were only taught abstinence and nothing about safe sex, STDs, or reproductive health. Three more women who received sexual education in high school took an education class as an optional after-school program that required a parent's signature to attend. Therefore, only five of the sixteen women were in high schools that offered comprehensive sexual education to all students. Of the women who did have comprehensive sexual education in school, all remembered at least the basics of reproductive health care. The participants who did not have sexual education in middle or high school were either much less knowledgeable about reproductive health or did not learn about reproductive health until they came to college. The sexuality education policies that are formed on a national and state level and implemented at the local, intermediate institutional, and policy levels influence the knowledge of individuals about reproductive health.

The procedures at health care institutions regarding patient education can increase knowledge among clients. Client Centered Counseling is applied at

Denver Health to educate patients at the STD and family planning clinics. Client Centered Counseling is a technique used to modify the sexual behaviors of patients to reduce the risk of STD or HIV infection. Similar programs were in place at Salud Clinic and Planned Parenthood to inform clients of safer sex methods and screening recommendations. These policies affect the relationship between provider and patient examined at the micro-social analytic level.

The policies at certain churches also influenced communication about reproductive health. Women attending very conservative churches felt like their religious practices hampered discussion concerning sexual activities and STDs. In one family, the daughters were raised to be strong Christians, so their mother did not want to talk to them about sex. This is because they were not supposed to be having sexual relations until marriage. When one daughter became pregnant at 15, their father stepped in and provided them with information about safe sex and birth control. Another woman's cousin impregnated his girlfriend because he did not learn about birth control in his very religious family. Several other women never learned about sex or reproductive health because their families thought such discussion was un-Christian and it was never taught in their Catholic schools. The Iranian-American woman said that sex is not talked about in her community due to culture and religion, even though girls are having sex and even abortions. Several women had left the Roman Catholic Church because they thought their ideas regarding sex or pregnancy before marriage were unrealistic. They felt like they were being chastised at church rather than supported. For one Mexican immigrant, this resulted in her having to keep things to herself:

Just the only thing is that you keep, you kept a lot to yourself, if you noticed you had issues or noticed that there was something funky or whatever, you kind of had to keep it to yourself, you couldn't really talk to no one, a lot of that was because of that, the church did a wonderful job, they do a wonderful job of making you feel like you're nasty or a pervert or something.

Not all churches were this conservative. A Mexican immigrant said that La Iglesia de Guadalupe, a Roman Catholic Church in Denver, presented an open dialogue concerning birth control and condom use. She felt like this was important and showed that some churches are dealing successfully with current problems by providing information to its congregation. The policies at churches can thus facilitate or inhibit knowledge about reproductive health care.

### Micro-Social Level Influences on Knowledge

All of the clinicians saw education as one of their primary functions. They not only educated patients in a one-to-one environment, but also acted as community educators at colleges, high schools, and health fairs. At Denver Health, each client at the STD clinic receives Client-Centered Counseling. Clinicians go through a safe sex protocol with teens and adults who come in for annual check-ups, STDs, and other reproductive health care concerns at Salud Clinic. In Planned Parenthood, the walls were decorated with informational posters, including one about the HPV vaccine. The clinicians there said that these posters initiate conversations with patients.

All women in the study had received much of their information on reproductive health care and health in general from their health care providers. Over half of participants had learned a great deal about reproductive health from Planned Parenthood and the literature they provide patients, either in the clinic or in outreach classes. Every informant who had used Planned Parenthood for medical services or to gain information was extremely pleased with the experience. When one woman was diagnosed with HPV and herpes, she went to Planned Parenthood for information because she felt like her private doctor was not educating her. Half of the women also learned about the HPV vaccine from

their physician. Most women were happy that they were educated by their physicians and were pleased with the information they received. One woman found the information she received from her health care provider to be helpful, but she had to ask for the information she received, “I wouldn’t really say that they give you the information without you asking for it.” This indicates that some clinicians need to be more forthcoming as they are educating their patients.

Interactions that take place in the classroom also occur at the micro-social level. These social interactions are heavily influenced by cultural norms and values, such as the negative stigma associated with STDs and sex. Two women had been to sexual education classes or discussions about STDs that were open to both men and women. They felt like the session would have been more helpful if it was divided by gender because they felt more comfortable talking about STDs when it was just women. Another woman had been to a class where the teacher tried to talk about reproductive health and the students refused to speak and giggled when someone mentioned sex. The participant said it was interesting to see how uncomfortable people became when the subject of sex came up.

### Individual Level Influences on Knowledge

Families and friends act as the social support network in the individual level of the political economy framework. The Salud Clinic clinician hypothesized that there had been no drops in teen pregnancy among Latinas as there had been among African-Americans because there is no dialogue or education on sex within the Hispanic family. Participants indicated little conversation regarding reproductive health or sex with their parents. The conversation one woman had with her mother exemplifies the typical conversation between these participants and their parents. The woman did not say

anything and did not ask any questions, her mother simply said, “wait till you’re married.” In one family, they did not talk about sex until a teen daughter became pregnant. Only four participants had open conversations with their parents. In one of those conversations, sex and reproductive health were explained fully with the caveat that premarital sex is undesirable. Many participants said they discussed these issues commonly with family members their own age, such as siblings and cousins. Several women said they wished they had had an open discussion with their parents about sex and planned to do so with their own children. One mother expressed the importance of this discussion succinctly,

I think it’s really important that parents discuss reproductive health with their children, just because even if there’s not like that strong of a relationship, I think that children will listen to their parents and anything that they say and they might not take it into account, but they’ll listen, I didn’t have that, but I think that I will talk to my daughter about sex and whatever, I think a lot of parents don’t because it’s uncomfortable, but I think it’s important.

A Mexican immigrant said that she wanted her sisters to be able to be more open with their mother about sex because she did not have an open relationship. She said that we are doing our children a “disservice by teaching them abstinence.” Although open conversations about sex were rare among participants, conversations about overall health were common and almost two-thirds of participants listed their parents as major sources of information on health. Additionally, when they were in high school, three women got their parents signatures in order to attend a comprehensive sexual education class.

Friends are also an important source of knowledge. Almost half of participants learned about other STDs, such as gonorrhea and Chlamydia, from friends who had them. One Mexican-American said she learned that safe sex was important because several of her friends had contracted an STD. Almost a third of women learned about Pap smears from their friends and six women received much of their information about health from friends. One clinician said that some

clients were coming in to get the HPV vaccine because their friends had gotten it and told them about it. Several women learned about HPV from friends who had been diagnosed with it. One of the women in the study who was diagnosed with HPV informed her friends about the infection. Other women learned about the vaccine from friends who had gotten immunized. A Mexican immigrant said that she informed all of her friends about the HPV vaccine. Although many women received information from friends, the information they received was not always correct. One woman learned from her friend that HPV was a mild form of herpes. Another woman was told by all of her friends that the vaccine makes you pass out, even though this side effect is rare.

Personal experiences and interests take place at the individual level of analysis. Women who had experienced an STD or another reproductive health problem in the past had more knowledge of STDs and reproductive health care in general. One Mexican-American who was a mother was also very knowledgeable about reproductive health in part because of her experience being pregnant. At the Auraria Health Center, women who had been diagnosed with HPV at some point were more likely to ask about the HPV vaccine. Women often came in asking about the vaccine if they had a relative with cervical cancer at Salud Clinic. Several women actively sought information regarding HPV and STDs simply because they were interested in the subject. Others did not care to learn anything about STDs because they were not sexually active and had no interest in the topic.

Unfortunately, three women in the study had been diagnosed with either HPV or herpes. They were able to offer stories of their experiences of having an incurable but treatable STD. All were disappointed when their physician's told them that a condom would not have protected them from contracting the infection or from spreading it to others. This made them feel like they had no control in preventing the STD and that sex itself was a risk. The fact that the STD she



contracted was not curable was really hard on one woman, “it’s kind of devastating because your life changes, in my case it’s not curable, so it’s going to be a constant concern for the rest of my life.” Two women had to undergo biopsies or the LEEP procedure. For one Mexican-American, the biopsy was scary and painful, but the LEEP was really hard for her because she was afraid it was going to make her infertile, “like that was just really devastating because they wanted to avoid it because it can affect your ability to have kids.” The other woman who received a biopsy said it was not only painful but she was overwrought emotionally by the procedure,

I just felt like, even though it was like the tiniest piece, I just felt like I got a piece of my woman-hood taken away and I was like it’s so tiny and I know it’s to help me and everything and I was like but, it just feels like you’re so confident in your body and in your health and to hear that you’re not doing well or something’s wrong like, like it just kind of blew me out.

As stated previously, macro-social forces do not blindly influence the individual. Individuals do not always buy into the ideas presented in the general society, such as the negative discourse about the HPV vaccine and comprehensive sexual education. None of the participants thought the HPV vaccine would promote early onset of sexual activities or promiscuity. One common reason given was that young girls do not have to know what the shot is for. In the words of one Mexican-American, “they don’t have to know what it’s for, I used to go to the doctor all the time, I got shots, and I didn’t know what they were for.” One woman said the HPV vaccine should be seriously considered and would not promote promiscuity because,

it’s just a matter of educating the girls, what’s the reason for it, what are the consequences you know, I wasn’t educated at all in like the whole sex stuff in school or through my parents, so it’s bringing awareness to those girls is what they need.

Additionally, women said that protection against just one STD would not make them change their minds about sex. All women also supported comprehensive

sexual education in schools and by parents. The women who had not had sexual education found different sources of information and several wished they had been given the opportunity to attend a sexual education course.

### Acculturation and Knowledge of Reproductive Health Care

Acculturation among Latinas affects knowledge of reproductive health care as individuals select certain values and beliefs from both Hispanic and US cultures. The clinician at Salud Clinic said that there was a big difference between first generation Mexicans and Mexican-Americans in terms of knowledge. Mexican-Americans tend to be more familiar with the US medical system and biomedical models of health. One cultural value that was evident among the Latinas in the study was that they had a strong family value or familialism. A quarter of the participants said that strong family values separated Latinos from other ethnic groups. This encouraged women to rely on the knowledge their mothers or other family members had passed down to them regarding health. Even though women relied on this knowledge, it changed over time as they experienced other social relationships and gained new information from friends and clinicians. For instance, a Mexican immigrant was given douches with soap and water by her grandmother and mother and thought it was an appropriate way to keep the reproductive system clean and functioning properly. Her grandmother and mother never talked to her about why they were giving her douches when she was little, but she continued the practice after they stopped giving them to her because she thought it was a way to keep her clean. However, her friends told her when she came to college that this was an unhealthy practice.

Over a third of participants were also very concerned with infertility caused by STDs because most of the women felt that having children was very

important to them. Over a quarter of the Latinas noted that having many children and having them early was considered the norm in their family. However, no participants said that they actually discussed having children at a young age with their parents, they simply observed their parents, siblings, and cousins having children from the age of 16 on. Overall, they felt it was a norm that was not communicated openly by parents. One fourth generation Hispanic woman never discussed sex with her parents, but her mom often pointed out her cousins who had children at a young age as an example of what not to do. Cousins and siblings who were similar ages did talk about sex and having children when they were young.

Being more conservative sexually was named as an important value for Latinas. The idea of being a virgin before marriage was very strong among these women, especially among those who expressed more involvement within a church, Roman Catholic or not. Several women voiced disappointment when they lost their virginity before marriage, like with this Mexican-American, “I remember the time that I actually did like lose the whole virginity thing I actually cried just because I couldn’t, I felt like I failed.” However, the majority of the participants were sexually active. Cultural values do not always correlate with behaviors. This is problematic because women may be uncomfortable discussing their behaviors with older family members, such as parents, grandparents, aunts, and uncles, if they do not coincide with cultural norms. Half of the women in the study were in long-term relationships that had lasted two years or more. The clinician at Planned Parenthood said that in her experience treating Latinas, they tended to more often be in long term relationships than women of other ethnicities. She thought that this probably led to decreased condom use because women in long-term relationships who think it is monogamous are not as worried about STD transmission.

A quarter of Latinas had not learned about Pap smears from their families because Pap smears were not considered a culturally appropriate procedure for women before they had children. This belief was only evident among first and second generation Mexican-Americans. In the words of one Mexican immigrant:

So for me, culturally was one of those things where, Pap smears are not acceptable, it's just one of the, culturally like women are just supposed to be very private with their bodies and so use of like tampons and Pap smears, anything that kind of my mom would say forces some kind of, was not, it was just always, I never thought a Pap smear was necessary, because it's always not done until you have kids and my mom and my family, it was always like, it's not a taught thing before you have kids that you need to have a Pap smear, so I never knew that.

Pap smears and tampons were not culturally acceptable in this woman's family because they forced foreign items into the vagina. This is considered especially bad for women before they are married because it "ruins you" and takes away from one's virginity. Her mother only told her these items were unacceptable after she brought tampons into the house and after she asked her mother about Pap smears. Interestingly, this woman was given douches by her mother and grandmother, but these were not considered intrusive items. This discrepancy between Pap smears, tampons, and douches was not discussed in the interview. For this woman, it was very important for her that Latinas become comfortable and understand their body. Knowledge of one's body was vital to her because she felt like you cannot detect possibly negative changes in your body unless you are familiar with it. She enlisted the help of Sisters of Color to explain to her mother and sisters that knowing your body is not something to be ashamed of, but is important for good health. At first, her mother was resistant to these ideas and worried what her daughter was learning in college. However, as the participant was able to provide her mother with culturally appropriate information in Spanish, her mother began having discussions with her young daughters on reproductive health issues. A second generation Mexican-American also noticed this

embarrassment with older Latinas. She thinks they do not want to have cervical cancer screening until after they have children or they feel like something is wrong. Even then, they are reluctant to get Pap smears. Two other second generation Mexican-Americans had not received a Pap smear because they did not know women were supposed to get screened before they had children.

## CHAPTER 5

### ACCESS TO REPRODUCTIVE HEALTH CARE AND THE HPV VACCINE

As evidenced by condom use and intention to become vaccinated against HPV, there is a gap between knowledge and behavior. Access to health services helps explain this gap. Even if someone knows what actions they are supposed to take to be healthy, they will not do so if they do not have access. One of the women's health nurse practitioners said she did not think Hispanic women came in for exams as often as non-Hispanics. Over a quarter of women in the study had never had a Pap smear. Three of these women were sexually active. A Peruvian-American had not received cervical cancer screening after she became sexually active because she did not have health insurance at the time. When she was enrolled in a health insurance plan shortly before the interview, she made an appointment for a Pap smear. This gap is not unidirectional. Although the participants often lacked knowledge regarding Pap smears, they were apt about receiving them if they had access to health services. Over two-thirds of the women interviewed had received a Pap smear within the last two years.

This pattern also occurred with the HPV vaccine. Over a third of the participants knew about the HPV vaccine, were interested in getting it, but had not. The majority of women said that the price had prevented them from becoming vaccinated. A quarter of the participants in the study had already begun the HPV vaccine series and two women had appointments at the time of the interview to receive the first shot in the series. Of these six women, only two understood what the HPV vaccine was for.

## Macro-Social Level Influences on Access

Cost and the public and private health insurance systems interact to facilitate or restrict access to reproductive health care at the macro-social level. Since Medicaid and private health insurance are primary payers in the US health system, finances, Medicaid, and health insurance are interconnected. All clinicians named poverty as a major barrier to health care. The poor are less often insured and cannot afford out-of-pocket costs for medical care. A Mexican-American student also felt like Hispanics were financially marginalized in Colorado compared to Albuquerque, where she moved from. The ethnic relations in Colorado surprised her because everything seemed more integrated in New Mexico where people of all classes were Hispanic. For instance, a second generation Mexican-American said she often felt ostracized in school because she was a part of an ethnic minority and in a financial minority group because she was not wealthy. This experience was uncomfortable for her, “it makes me feel like, they really just put you down like you’re not worthy of like being here or something.”

There are programs in the US and Colorado that were designed to provide care to uninsured individuals, such as Medicaid and the Colorado Indigent Care Program (CICP). Health care providers at Salud Clinic, Denver Health, and Planned Parenthood spoke extensively about these programs. Not all uninsured individuals qualify for these services and many health care institutions do not take Medicaid or CICP. Even after enrolling in these programs, individuals could still owe a significant amount of money after medical treatments. When they have limited resources, people have priorities in health care, so prevention often gets pushed aside first. A health insurance plan that encourages this behavior is catastrophic insurance, which is much cheaper for individuals than comprehensive plans. The health care provider at Salud Clinic noted that the popularity of

catastrophic insurance among young people has decreased the emphasis on preventive care. Clinicians at Salud Clinic and Denver Health both said that if people have to fully pay for preventive care out of pocket, they will not get it.

The nurse practitioner at Planned Parenthood said the cost of Pap smears was a barrier to many women. Although they have programs to finance STD screenings and Pap smears for women under 20 and over 40, there is no funding for women between the ages of 20 and 40 to receive low or no cost Pap smears or STD screenings. Without health insurance, this service costs 120 dollars. Planned Parenthood used to have a state program to provide care to Latinas, but they lost that grant. They are thus seeing fewer Hispanics in the clinic. At Auraria Health Center, the annual exam runs from 160 to 200 dollars for an uninsured individual. Salud Clinic was the cheapest place to receive a Pap smear. For a doctor's visit and a Pap smear, it was only 20 dollars.

In order to have full access to health care in the US, a person must have health insurance or qualify for public health care under Medicaid. Over two-thirds of the women in this study had health insurance because they still qualified to be covered by their parent's insurance. Other participants were covered by school insurance or by Medicaid. Only one participant was uninsured at the time of the interview. However, she was able to get health care because her father helped her pay for care, including Pap smears. This woman was not able to afford a full coverage plan. She did have catastrophic insurance for a time period, but thought it was too expensive for what it covered. Two additional women were without health insurance at some point within the year before the interview. The Peruvian-American said she went without health insurance for a year because she was on bad terms with her father, who provided her with health insurance.

The employer-based model for health insurance in the US is especially difficult for university students. As their circumstances change and they grow older, students are no long eligible to be on their parents' insurance. Before a



Mexican-American informant was uninsured, she was on her father's insurance, but was "kicked off" of the plan because of her age. Another woman's brother was having similar problems as he was kicked off their parents' insurance due to his age. Students are often unable to obtain employer-based insurance for themselves because they do not have time to work a full-time job. One woman did not have insurance for a while because she could not find full-time work.

Several women delayed getting care when they were uninsured because they could not afford to go to the doctor for non-emergency services. Although not being able to get preventive health services was a problem, not having health insurance during emergencies was especially pronounced in their recollection of being uninsured. Emergency situations instilled fear among those without insurance, as displayed in this Mexican-American's experience,

I had a cut right here and it was huge, I wasn't freaking out that I might lose blood and die, I was freaking out because I didn't have insurance. I was like I don't want to call an ambulance because that's going to be like another 800 dollars.

Women delayed getting birth control, Pap smears, and the HPV vaccine. A Mexican-American explains her experience with not having health insurance,

I quit getting my Pap smears because I couldn't afford them, and it was hard for me to get my birth control because sometimes I couldn't afford it either. I'm on the NuvaRing, so I would get it late, you know I would always be a week late, I would have to wait for a paycheck to get it. It was a bummer, so now that I have access to health care, I mean I already got my Pap smear and a new prescription for my NuvaRing.

A currently uninsured woman said that she would not have access to preventive health care, including Pap smears, if her father did not help her with the cost. The most participants said they could comfortably pay for one visit to the doctor's office was 50 dollars. All of the women who had health insurance were satisfied with the co-pay for doctor's visits because they only had to pay from 10 to 15 dollars for an annual exam. However, several women were dissatisfied with how

much they had to pay for birth control pills. They thought the 30 to 40 dollars they paid per month was too much. Latinas who said they were frustrated with this price said they could easily pay 15 to 20 dollars a month for birth control. One woman also thought the price of the morning after pill was too expensive through her insurance, so she went to Planned Parenthood where it was cheaper. Most of the women who had health insurance felt lucky that they did. All had friends and family members who could not access medical services because they did not have health insurance and could not afford them.

The US model of health insurance presents further obstacles to care. This model does not provide for continuity of medical care. A quarter of the women in the study were frustrated that they had to change insurance and therefore doctors because they or their parents changed jobs. Every time they changed insurance, they had to find a new provider that they could trust and feel comfortable with. Two Mexican-Americans complained about the referral system common with HMOs. They said that it delayed getting health care because they had to go to their family doctor first. At the time, both had co-pays of 50 dollars, so they had to wait to save up enough money for two co-pays instead of one.

The clinicians agreed that the cost of the vaccine was a major deterrent to receiving it. At the Auraria Health Center, they charge 120 dollars a shot, for a total of 360 dollars for the series. Neither Metro nor UCD insurance pay for the vaccine, so students on the university health plans must pay full price if they want to receive the vaccine. For women ages 19 and 20 who are on Medicaid, each shot costs 12 dollars at the Denver Health Immunization Clinic. A woman in the study had taken advantage of this program and started the series when she was 19. One shot costs 150 dollars if a woman is uninsured, over 20 and on Medicaid, or if their insurance does not cover the vaccine. At Planned Parenthood, Merck has a program where they financially cover the majority of the cost of the vaccine if the client is between the ages of 19 and 26 and makes below 20,000 dollars a

year. Under this program, each shot costs 20 dollars. Otherwise, each shot costs clients 150 or 210 dollars depending on whether or not they are a regular client at Planned Parenthood.

The most a woman with health insurance had to pay for the HPV vaccine was 15 dollars per shot. The participants who had been immunized thought this was a reasonable price. All of the women who had started the HPV vaccine series said they would not have gotten the vaccine if it was not covered by insurance or would have had second thoughts about getting the vaccine. One of the women who started the series said she had to delay getting the vaccine until she was insured. Half of the women in the study were either interested in starting the HPV vaccine series or had an appointment to start the series. The participants who already had appointments said that they had to figure out a way to finance the vaccine because their insurance did not cover it. The other women said they would have to think about financing to see if they could afford the vaccine before they got it. Participants who did not have health insurance or who knew that their health insurance did not cover the vaccine said they could only afford the vaccine if their parents or boyfriends covered some of the cost. Others said they could only afford it if their health insurance paid for everything except for their co-pay.

### Intermediate-Social Level Influences on Access

Policies at individual health care institutions create both barriers and facilitators to access. One participant said that she went to Tri-County Health, a local clinic, for an annual Pap smear and they would not give her one. This is because their policy has changed to only provide Pap smears once every three years. This worried her because within a year period, she had an abnormal Pap smear, a biopsy, and underwent a LEEP procedure. A Mexican-American

accessed reproductive health services for free at a teen clinic when she was 18. When she turned 19, she was no longer eligible for the services because of the policy at the clinic. She no longer had anyplace she could access reproductive health services at an affordable price. Due to the high cost of the HPV vaccine, a budgetary decision was made at Denver Health to not provide the HPV vaccine in the STD clinic or in their primary care clinics. Girls under the age of 18 at Salud Clinic could not get the HPV vaccine without parental consent. Although there is a law in Colorado that minors do not need parental consent for the diagnosis or treatment of STDs, Salud Clinic does not consider the HPV vaccine to be part of those services. Lastly, the student health insurance does not cover the HPV vaccine at the Auraria Health Center.

Institutional policies can facilitate access to medical services. At Salud Clinic, it is their policy to enroll every patient on Medicaid who qualifies. They have technicians there who help patients with the paperwork. All clinics had policies that women had to come into the clinic at least once a year to renew their prescription for birth control. This allowed clinicians time to recommend other important preventive services, such as the HPV vaccine and Pap smears. At Auraria Health Center, women had to have an annual exam to renew their prescription for birth control. Women had to receive a Pap smear at the initial visit for getting birth control at Denver Health. At Tri-County Health, a participant said that you had to go in every three months to renew the birth control prescription. Policies regarding the HPV vaccine also improved access by increasing physician recommendations. The policy at Auraria Health Center and Denver Health was to recommend the HPV vaccine to all women who came in for an annual exam. At Denver Health, they also recommended it to all girls under the age of 18 along with other school-required vaccines. However, the HPV vaccine is only offered in the immunization clinic at Denver Health, so clients would have to make an additional appointment to actually receive the vaccine.

Further, Auraria Health Center offers no financial resources to cover the cost of the vaccine. At Planned Parenthood the policy is to tell everyone about the vaccine. Girls under age 18 at Planned Parenthood also did not need parental consent for the HPV vaccine.

School policy can also affect access. If schools have a school mandated vaccine, the majority of students will get immunized. If there is no requirement, many students will not get a vaccine because of cost. For students attending MSCD, they are required to have insurance if they take 10 or more credit hours. If they do not have private insurance, they must pay for MSCD student health insurance. This policy ensures that all full-time students attending that school have financial access to services provided at the Auraria Health Center. However, part-time students are often the ones with the most limited financial resources. They take fewer credit hours because they must work more to support themselves. High schools in the Denver Public School system have clinics that provide care to students. Although this did not affect the participants at the time of the interviews, several said that they utilized the services offered at the school-based health clinics.

The policies associated with Medicaid hamper access to care. For example, many health care facilities, such as the Auraria Health Center, do not take Medicaid. The Salud Clinic nurse practitioner said that there are only two physician groups in Fort Collins, Colorado who take Medicaid and no specialists in Brighton, Colorado accept Medicaid. Doctors do not participate in Medicaid because Medicaid does not fully reimburse for all services. Since not everyone accepts Medicaid, clients have little choice of what providers they can see. If they do not like the only provider they have financial access to, they may not seek care. In order to provide the HPV vaccine, Denver Health had to discuss with Medicaid whether they were going to cover it and then had to figure how to bill Medicaid for the vaccine. This process is one reason why Denver Health does not

provide the HPV vaccine in the STD or family planning clinics, only in the immunization clinic. Although Medicaid will eventually pay for the HPV vaccine due to Colorado legislation, it is not currently covered because of administrative issues. In other states, the Salud Clinic clinician said that state legislators are not allowing Medicaid to pay for the “promiscuity vaccine.” At Salud Clinic, they often see people refuse to become enrolled in Medicaid because it has such a negative stigma. The clinician at Planned Parenthood utilized this stigma when she said that Medicaid enrollees abuse the services provided by Planned Parenthood, leaving less time for the clinicians to serve clients. According to her, Medicaid has no stipulations for the frequency of STD testing, so some Medicaid clients want to receive STD testing every few weeks. CICP is also available in Colorado, but it only reimburses 13 cents on the dollar if someone does not have Medicaid or private insurance, enrollment involves extensive and technical paperwork, no specialty care is provided, and patients can only use community health centers.

A Mexican-American participant who was trying to enroll her child in Medicaid said it was frustrating to enroll. She said the Medicaid administrators would not return her phone calls, asked for in-person interviews, and then canceled interviews at the last minute. Once they were enrolled, her child was dropped and then reaccepted for apparently no reason. She also felt embarrassed that she was on Medicaid and judged by the front staff at her doctor’s office. Medicaid was frustrating for another participant because her family was being constantly enrolled and dropped, she was automatically dropped when she turned 18, she was never able to have the same doctor, and she had to wait all day to see a doctor. She said that having a different doctor each time was awful because she had to explain her medical history every time she sought medical care.

## Micro-Social Level Influences on Access

The doctor-patient relationship affects access at the micro-social level. As noted by the clinician at Salud Clinic, if someone does not like their physician or physician group, they may not get treated. Though both patients and providers often value having a trusting relationship, this is not always possible due to time constraints. The clinician from Planned Parenthood said she thinks building a relationship with a patient is important because it keeps bringing them back for preventive care. However, working at a reproductive health care clinic leaves her with less time to build relationships than if she was working in a private clinic setting.

Building a relationship with a physician was important to most women. Finding a health care provider who they could trust was difficult for them. After having a negative experience with a physician's office, one woman stated,

I didn't feel comfortable and that was like the most important thing for me that I should feel comfortable at my doctor's office. So that was really hard, it's still hard, I'm still looking for a physician.

The women who had found a physician they could trust were grateful because it made them more comfortable during exams and more willing to go seek medical care. Over a quarter of participants had delayed getting a Pap smear because they did not have a personal relationship with a physician. Other women had stopped seeing certain doctors because they did not feel comfortable with them. The most common characteristics women were looking for in health care providers were trustworthiness, cordiality, and someone who was supportive and made them feel comfortable. This woman explains why having a relationship with a provider is important,

I went to one doctor once and it was not, I was like yeah, I can't do this. It's just a lot, it's kind of vulnerable when you're like, lay there, and you

know flap up you legs, you just have to be really comfortable and some [doctors], it's just not going to work.

Overall, the participants were unhappy when they had to leave a doctor and valued having long-term relationships with both physicians and particular clinics. One Mexican-American woman, however, was only concerned about building a relationship with a doctor if they were doing an intensive procedure, such as surgery. In fact, women who had been through an intensive health care procedure, such as childbirth, or who had chronic illnesses had closer relationships with their doctors.

Several women expressed concern going to their doctor with an STD because they would be embarrassed or ashamed. They especially felt uncomfortable if they and their parents had known their physician for a long period of time. This is demonstrated by one woman's experience when she was seeking care for an STD:

I felt like I've know this guy my whole life and he knows my family and yes, there's the doctor-patient privacy rule, but I just felt uncomfortable having to go to the same person again, especially now that I had something like herpes or HPV, I felt like he was almost like my dad and I didn't want my doctor to talk to me about that.

One Mexican-American woman had been diagnosed with ovarian cysts when she was younger, so she had spent quite a bit of time in her gynecologist's office building a relationship with the physicians there. Consequently, her biggest fear of getting an STD was "the whole being mortified going to tell my doctor I have an STD because she would probably have to kill me." Another woman stopped going to her gynecologist because the physician was a friend to her ex-boyfriend's stepmother.

Women valued being able to access health information from clinicians whenever they needed it without going into the doctor's office. One method of doing this was a general health line for people who have questions, which many women used regularly. One Hispanic woman said she used the Planned



Parenthood health line often, “I’ll call Planned Parenthood a lot if I have like a really pressing question cause they always have someone on call that will talk to you and that’s really, really helpful and I appreciate that.” Another method, implemented at Kaiser, was getting an e-mail from their physicians every once in a while. This allowed women to ask questions and bring up concerns that they had previously ignored.

All but two women in the study preferred female doctors, especially when seeking care for reproductive health issues. Several said they would refuse to see a male doctor unless it was a life or death situation. Two women had delayed getting a Pap smear because they could not find an office that was on their health insurance and had female doctors. A Mexican-American said that she went to Planned Parenthood because they had only female clinicians. Most women said they preferred females simply because it made the experience more comfortable. A Mexican immigrant said she did not like male doctors because she was embarrassed and she had seen female clinicians her entire life. Several women said they trusted female doctors more because they had personal experience with reproductive issues unique to women, this feeling is exemplified here:

I think it would be a little awkward to go to a male, just because there’s certain questions that you would have that he couldn’t answer, I mean he could answer from a medical perspective, but not from actually like having it perspective.

Doctors’ recommendations strongly influenced whether women received annual Pap smears and the HPV vaccine. Over one-third of the participants said they got annual Pap smears because their doctor told them they needed to. Otherwise, they would not have gotten them annually because they did not know what they were for. All four of the women who had received the vaccine did so because their doctor recommended it. Several other women wanted to start the series because their doctors had recommended the HPV vaccine to them. One woman wanted to start the series but did not initially because her doctor told her

she should not get the vaccine since she already had one strain of HPV. However, she thought this was incorrect and went to Planned Parenthood where they told her that the HPV vaccine could protect her against the other three strains in the immunization. At the time of the interview, she had an appointment to receive the first shot in the series. A Mexican-American was not interested in getting the vaccine because her physician said she did not need it after she spoke with him about being immunized,

After hearing all that like that big concern about the cancer and everything I talked to my doctor, and he honestly told me it was basically that, like a hubbub, if people have not been getting the shots and not been getting cancer for a long time and it doesn't run in my family, I don't have a high probability of having it.

The clinician at Denver Health said that how you phrase the HPV vaccine when recommending it to patients influences whether they will get it or not. Several clinicians said they try to focus on the cervical cancer aspect of HPV.

All women in the study who had been to Planned Parenthood had positive experiences. Two women said they used Planned Parenthood before they were 18 because they knew they could get services without parental consent. They also used Planned Parenthood after they turned 18 so they could get reproductive health services without it appearing on their parents' insurance. One woman said she liked Planned Parenthood because they have all female doctors. The inexpensive price was also a draw for informants. Half of the participants utilized Planned Parenthood for services. The overall experience women had with Planned Parenthood is summarized here,

I love Planned Parenthood, they're just so welcoming and they don't, it's almost, as weird as it sounds, it's almost as if they've been through the same exact thing and you know they understand you and they don't judge you, they welcome you, I just feel at ease when I'm there. I really feel like they're reliable and they're just there for you and they're not there to judge you or anything.

When asked where they would go for reproductive healthcare if they were uninsured, over two-thirds of women said Planned Parenthood.

Over half of the participants were reluctant to seek medical care from certain facilities because they had negative experiences with their physicians or the medical system there. One woman no longer trusted the clinic where she went because they failed to diagnose her HPV infection. When she went to her family doctor, they gave her a biopsy immediately and then she had to undergo a LEEP procedure. She is afraid that if she had relied on the clinic, her outcome may have been much worse. Another woman was misprescribed a medication for oral herpes when she in fact had genital herpes. She was also uncomfortable going to her physician's office because she felt like she was being judged by the doctors for having a STD. A similar situation happened to another informant where she felt judged because she was getting the morning after pill. After that experience, she was reluctant to go back to a doctor for reproductive health care and had delayed receiving her annual exam. A Mexican-American informant had pain in her wrist so she went to the doctor. Her doctor told her that the pain was in her head, which was very frustrating to her. Five years later, another doctor told her that she had an elongated process on her C4 that cut off blood flow and the nerves into her arm. This aggravated her and made her feel like some doctors are not willing to look at other possibilities when they cannot diagnose someone within a matter of minutes. The most common complaint involved miscommunication. Several informants had a miscommunication with a physician which led to mistrust. One informant was not told that her new birth control pills did not have a placebo week, so she had to take the morning after pill, which was uncomfortable for her. A woman who was diagnosed with herpes and HPV was upset with her doctors because they did not tell her what an abnormal Pap smear meant, did not tell her anything about herpes and HPV, and erroneously told her not to get the HPV vaccine. When asked how often she got a Pap smear, she said,

“I was supposed to go every six months but, I mean, this is stupid that I do this, but I was just so mad at the office and I’m still trying to find a reliable one and I just haven’t been going.” A second participant had a similar complaint saying that she did not get enough information from her doctors because they were always so rushed. Two women had stopped seeing doctors because they did not feel comfortable around them and felt like the doctors were unfriendly.

A quarter of the participants had bad experiences with their health care providers because they had to wait so long to receive services. This made them not want to go back to those facilities to access services. A Mexican-American complained that the Denver Health STD clinic made her wait all day to get a STD screening. When one woman went to the emergency room with a severe laceration, she had to wait several hours even though she was bleeding profusely. Another woman had to wait eight hours in the emergency room to be seen by a physician. One Mexican immigrant struggled when she did not have insurance because it took her all day to get any kind of medical care. An especially frustrating experience was when her mother had appendicitis,

We waited for a good probably seven hours, I’m not going to lie, and my mom’s appendix almost ruptured, I think a lot of it too, just again, it’s just the waiting, because there’s no, it’s almost like there’s no actual system when it comes to people with no insurance to go get, to get assistance and to get seen and just for us to go to the dentist was kind of an issue, we go in there and we wait and we wait, I’d end up waiting for like a really long time and so it’s just really I can’t explain the feeling of how that it is, it’s almost like no one cares.

Although these experiences do not relate to access to reproductive health services, they do show that negative experiences with health care providers or the medical system affects a participant’s willingness to seek treatment and their attitudes towards providers.

## Individual Level Influences on Access

Parental consent and acceptance was an issue for women receiving reproductive health care. The Salud clinician said that confidentiality is a big issue for teens coming in because they have STDs, are pregnant, or need birth control. Clinicians at both Salud Clinic and Planned Parenthood felt like parents were reluctant to educate or financially support their daughters in getting the HPV vaccine because it is related to an STD. Not needing parental consent at Planned Parenthood and being able to pay for services there without the services appearing on insurance statements was a draw for several women before they turned 18. Participants who valued this thought that their pediatricians or family doctors could talk to their parents about their utilization of reproductive health services. They did not know that parental consent is not needed in Colorado to access reproductive health services. The Iranian-American woman said she was uncomfortable getting certain services under her dad's insurance, which is why she went to Planned Parenthood. Two Mexican-Americans did not go in for Pap smears until their friends told them about the procedure because their mothers never talked about it. One woman did not want to get the HPV vaccine because her mother told her she should not.

Parents can be facilitators to women getting reproductive health care. Over a quarter of Latinas started going to a doctor to get Pap smears and birth control because their mothers told them that they should. This Mexican-American's mother told her to get her first Pap smear, "When I was about 15, my mom just started to tell me that you need to start going to the doctor now to have woman check-ups, so my mom was the one that initiated it." Several Latinas were interested in getting the HPV vaccine because their mothers told them about it. One Mexican-American got the vaccine because her mother recommended it, "My mom had been reading up on it and she told me to go get the shot." Two

Mexican-Americans said they were going to get the HPV vaccine because their fathers said they should become vaccinated and would financially support them in doing so. Even though parents recommended to their daughters to go to a physician for reproductive health services, they told their daughters to simply go in for a “woman check-up” and then let the health care providers explain the specifics of reproductive health.

Access to reproductive health care is interrelated with personal knowledge of reproductive health and the medical system. In order to have access to reproductive services, an individual must know that they exist and the purpose of preventive measures, such as vaccines or screenings. For instance, the Planned Parenthood clinician said that women stop coming in for regular pap smears because they get a few tests, the tests come back normal, and the women do not see the importance of getting further Pap smears. They must also have enough knowledge of the medical system so they know where to get care. The clinician at the Auraria Health Center said that a major barrier to access for uninsured women was that they do not know which clinics they can use for an affordable price. Most women who were insured knew where they could go to get reproductive health care. Still, three Mexican-Americans who were insured did not know where to go to get a Pap smear because they wanted female doctors and their family doctor was male. One woman did not know where to go to get the HPV vaccine because her health insurance did not cover it. Another Mexican-American said that she knew where to get care now, but did not know how to access services when she first became uninsured. When the informants were asked where they would go for medical services if they did not have health insurance, the majority had no idea where to go and admitted that they would avoid going to the doctor because of the expense.

Several women admitted delaying medical care for reasons other than financial barriers. Two women said that their lives were just too hectic to take the time to go to the doctor for a condition that was not serious or for preventive care.

### Acculturation and Access

Although Spanish-speakers have historically had problems interacting within the US medical system, language barriers were not affecting any of the women in this study at the time of the interview since they all currently speak English proficiently. However, several women preferred to use Spanish in the past with their health care providers because they felt their English was inadequate to explain their health concerns. The provider from the Auraria Health Center said language was not an issue because all students must speak English and there are always several people in the clinic who speak Spanish. The Denver Health clinician acknowledged that there is racism directed towards Latinos in the community, but she has not seen it in the health care setting. Further, much of the staff there is bilingual and Spanish translators are always available. At Salud Clinic, everyone on the staff speaks Spanish. Planned Parenthood also has at least two to three Spanish speakers in the clinic at all times.

Still, the Salud clinician said that access to health care increased in Mexican-Americans compared to first generation Mexicans. No Latinas in this study had experienced language barriers when accessing care in their adult lives. However, many of their parents and family members had because they do not speak English well enough to understand everything the doctor or clinic staff says, especially when they use medical terms. They also do not fully understand the information sheets or brochures that are given to them in English. Both Mexican immigrants cited this as problem for their parents or family. One

Mexican immigrant said that she and her family did not trust non-Hispanic whites when they first moved to the US because they felt that they did not respect Mexicans. She felt like they used Mexicans as scapegoats for US domestic problems and criticized Mexicans who were mono-lingual Spanish speakers. This hampered their access to health care, especially when dealing with front office staff. As her family became integrated into the US, they felt more at ease with services provided by non-Hispanic whites.

Another Mexican immigrant said coming to the US was a struggle because there were no resources to help her family settle into their new life. They had difficulty accessing the services that were available because they could not speak to anyone due to language barriers. She did not have access to health care growing up, but she does now because she has a good job that provides it. She said that Sisters of Color really helped her mom become more educated about health issues because they offered information in Spanish. She felt like the struggle she went through was a major strength for her because she is now fluent in two languages and can shift between two cultures. Two of the women defined themselves as Latina or Hispanic instead of Mexican-American because they did not think they had experienced the racism or struggle that many Mexican-Americans have undergone. Both of these women were more than third generation.

The clinician at Planned Parenthood said that Latinas tend to prefer hormonal contraception in the form of a patch because they do not like taking the pills. Over a quarter of participants expressed this distaste for taking pills. One second generation Mexican-American said that she did not have a problem with the morality of taking birth control, but was concerned about the safety of taking a pill every day. A Mexican immigrant stopped taking birth control pills because they gave her headaches, but the pills also made her feel uncomfortable, "I don't like taking birth control, I think the pills, I don't know, they freak me out to be



honest, I just think you're putting a lot of stuff in your body that shouldn't be there." This fear could be due to the fact that she did not grow up taking pills for really anything, but instead relied on herbal remedies and cures that her mother knew. Not only did they not like birth control pills, but participants did not like taking antibiotics or over the counter painkillers. In the words of a third generation Mexican-American, "I'm not a big fan of taking antibiotics or anything like that." Another third generation Mexican-American did not like taking medicine at all, "I don't necessarily like taking medicine and I hate prescribed medicine, I hate taking Advil for headaches." This distrust of birth control pills, antibiotics, and other pills led to a distrust of the HPV vaccine in a second generation Mexican-American participant. She was interested in getting the vaccine, but was concerned that it was not safe and had not been on the market long enough to be proven safe.

Due to strong views about premarital sex among Latinos and Roman Catholics, the Salud clinician did not think unmarried Latinas wanted to come in for reproductive health because they are ashamed and embarrassed to admit and talk about the fact that they are having sex before marriage. She saw this as a major barrier to care. Many of the women who were interviewed expressed conflict with their family when their parents found out that they or one of their siblings were having sex before marriage. Their family berated women when they chose to move in with a boyfriend before they were married. One Latina said she delayed going to the doctor for reproductive health when she was in high school because she was trying to hide the fact that she was having sex. Even though her family was very open about reproductive health care, one Mexican-American said that other families in her community were horrified when they found out their daughters were taking birth control before marriage.

There were some negative ideas regarding Pap smears that limited access to them. The clinician from Salud Clinic said that older Latinas were less likely

to come in for Pap smears even though their age put them at higher risk for cervical cancer. The Planned Parenthood clinician said she wished she could get more Latinas in for reproductive health care, including the HPV vaccine. Most Latinas agreed that having a Pap smear was a very personal matter. They often delayed getting screened for cervical cancer because they did not feel comfortable during the procedure and had a hard time finding a doctor they could trust. One Mexican-American said she delayed getting a Pap smear, but did not delay getting health care for other reasons, like when she had a rash, because the rash “was a minor thing and a Pap smear is more of a personal thing.” As discussed earlier, several women did not know that they were supposed to get Pap smears before they had children. Their mothers had told them that Pap smears in essence ruined their virginity. The negative stigma associated with STDs was cited as another barrier to reproductive health care by the nurse practitioner at Salud Clinic.

## CHAPTER 6

### CONCLUSION

The specific aim of this study was to examine Latina university students' knowledge of and access to the HPV vaccine. Issues relating to reproductive health were also explored in order to contextualize knowledge and access to the vaccine. As demonstrated in Chapter 4, there was confusion concerning the purpose of Pap smears, the prevalence of specific STDs, and the characteristics of HPV. A gap was shown between knowledge and behavior. Even though women knew they should use condoms, many did not. Over a third of participants knew about the HPV vaccine, were interested in getting it, but had not become immunized.

Forces at all levels of the Baer *et al.* (2003) critical anthropology model affected knowledge. The public media, US cultural beliefs, low socioeconomic status, education level, and the disparities in health care between the US and Mexico influenced knowledge at the macro-social level. At the intermediate level, policies of social institutions, including schools and health care facilities, supported or created barriers to sexual education. Interactions that occurred between provider and patient were at the micro-social level. All informants had received important information about reproductive health from their physicians. At the individual level, family, friends, and personal experiences shaped the knowledge of reproductive health and the HPV vaccine.

Cultural beliefs among Latinas influenced knowledge at multiple levels. Familialism resulted in a strong bond among family members, making knowledge gathered from family especially important for informants. A core value for the

participants was being more sexually conservative. Traditional values supporting women remaining virgins until marriage hampered communication about premarital sexual activity between young women and older family members. Still, as the women started having their own experiences and interacting within US culture, beliefs changed over time. Women were particularly likely to change their ideas regarding premarital sexual activity. Interestingly, no participants acknowledged conflict as these belief systems merged. Women largely felt lucky that they could pick and choose beliefs from different cultures. Lastly, several first and second generation Latinas said that they had not learned about Pap smears from their mothers because it was not considered an appropriate screening procedure for women before they had children.

The gap between access and knowledge was exemplified in Chapter 5 as Latinas were getting Pap smears when they had access even though they did not know why they were getting them. The macro-level forces that were fundamental to access were financial costs and health insurance. As with knowledge, the policies of individual health institutions and schools served to facilitate or hamper access to health care at the intermediate-social level. Additionally, the policies of Medicaid at a federal and state level influenced access. The relationship between provider and patient had the ability to increase or decrease access. Participants overwhelmingly valued having a relationship with a provider and were most comfortable with female physicians. However, Latinas were reluctant to go to a doctor who was a family friend for reproductive health care. Further, they avoided going back to a health care facility if they had a negative experience there. Parental support and personal knowledge of the US medical system affected access to health care at the individual level.

Acculturation also played a part in access to reproductive health care. Although none of the participants currently experienced language barriers when accessing health services, Mexican immigrants had encountered language barriers

and racist attitudes when they were younger, particularly with front office staff. Most second and third generation Mexican-Americans had not personally experienced this, but had seen or heard of other family members struggling to gain access to medical care. In terms of cultural beliefs, over a quarter of Latinas did not like taking pills for any reason, especially for birth control. This distrust of medications led to a distrust of the HPV vaccine for one second generation Latina. Additionally, several informants were hesitant to access reproductive services because they did not want their parents to know that they were having sex before marriage.

Women with particular attributes tended to know more about HPV and the HPV vaccine and perceived greater access to the vaccine. Demographic characteristics that seemed to be associated with increased knowledge and access include: older age, being an upperclassman or an alumni, both participant and parents being born in the US, being in a family that does not practice strict Roman Catholicism, and having parents that are more educated and have a higher income. These attributes are of course interrelated. Probably due to the fact that most participants were students, personal income did not seem to affect knowledge or access. Participants who had experience with reproductive health issues, such as having an STD, ovarian cysts, or having been pregnant, were particularly knowledgeable about HPV and had greater perceived access to reproductive health care. Women who were interested in women's health were also more knowledgeable and had greater perceived access.

Participants were solicited for feedback on the preliminary results of this analysis. Although 11 students and all key informants were contacted with the results, only three students replied with comments. All comments were positive and all said that the summary was "good." Two of the women thought that it was a good representation of their experience. One participant was pleased with the

information because she thought it “would be helpful for health care providers and to the public.”

This research supports the literature on reproductive health knowledge in several regards. SES disparities in knowledge were apparent in this analysis as well as several other studies (Breitkopf *et al.* 2005; Pick and Cooper 1997; Pruitt *et al.* 2005). Only one research article explored the influence of religion on knowledge of reproductive health, and they found that more religious students knew less information about reproductive health (Coleman and Testa 2008). In this study, women with families who practiced more conservative forms of Roman Catholicism tended to be less knowledgeable about reproductive health care. Patients in this study who had personal experiences with reproductive health issues were more knowledgeable about reproductive health, as demonstrated in the literature (Breitkopf *et al.* 2005; Dell *et al.* 2000; Pruitt *et al.* 2005; Vail-Smith and White 1992; Yacobi *et al.* 1999). As in the literature, there were gaps in knowledge regarding reproductive health. Participants demonstrated low knowledge about HPV and the purpose of cervical cancer screening. In particular, they confused HPV with herpes, as was done in other studies (Baer *et al.* 2000; Mays *et al.* 2000; Yacobi *et al.* 1999).

Several of the macro-social level influences on access described in the literature were supported in this study. Financial barriers were important in preventing Latinas from receiving Pap smears and the HPV vaccine. Among Latinas and other populations, financial barriers have been chief in decreasing access to preventive health services (Andrulis 1998; Cohen and Martinez 2007; de la Torre and Estrada 2001; Owusu *et al.* 2005). Further, participants in this study were more likely to have regular STD screenings and Pap smears if they had a regular source of health care. This was also demonstrated in several other studies (McMullin *et al.* 2005; Owusu *et al.* 2005). On the micro-social level, several research articles have described the importance of the physician-patient

relationship in affecting access to health care (Lucero *et al.* 1996; Owusu *et al.* 2005). Latinas in this study were more likely to undergo preventive health measures if the procedures were recommended by their physician and were unlikely to return to a health care facility if they had a negative experience with health care providers at that location. Ethnic disparities in Pap smear utilization are apparent in the literature. Although the Latinas in this study were not compared to women of other ethnicities, almost a quarter of the Latinas had not received Pap smears even though they should have been getting annual Pap tests according to current guidelines. Women who were first generation Mexican immigrants or who had parents who were first generation immigrants from Mexico or South America tended to use fewer reproductive health services. Several variables relating to ethnicity described in the literature also influenced access for the women in this study, including: having a relationship with a provider that is based on trust, dignity, and respect (de la Torre and Estrada 2001; Lucero *et al.* 1996; Scarinci *et al.* 2003), a strong sense of familism (de la Torre and Estrada 2001; Marín and Gamba 2003), and language differences (Lobell 1998; Lucero *et al.* 1996). Still, language differences only affected women's families or the women themselves when they were younger and spoke less English.

In other areas, this research fills gaps in the literature. A cultural backlash against the HPV vaccine among conservative groups and some parents is well documented. However, little has been reported on the attitudes of teens and young adults towards the vaccine. In this study, there was an overall positive attitude towards the vaccine. Two women were not interested in becoming vaccinated because they did not think they were at risk of becoming infected with HPV. However, they saw the vaccine as a positive addition to biomedicine. In several studies, Latinas associated cervical cancer with what they called "immoral" sexual behaviors (Chavez *et al.* 1995; McMullin *et al.* 2005). The

literature was unclear if Latinas also associated these behaviors with the contraction of STDs and HPV. In this study, participants did link certain behaviors with getting an STD or HPV, including having multiple sex partners, not using condoms, and drinking excessive amounts of alcohol.

Several attributes were unique to this group in comparison to other studies of Latinas. For instance, the vast majority of women were insured, even though a high percentage of Latinas in this age range were uninsured in other studies (Glasgow *et al.* 2004). This may be largely due to their status as students. Education level was also shown to be associated with knowledge of cervical cancer screening in the literature Breitkopf *et al.* 2005; Gerhardt *et al.* 2000; Massad *et al.* 1997; Pick and Copper 1997; Pruitt *et al.* 2005; Rind 1991). However, with the women in this study, age seemed to be more associated with knowledge than education level, because older women tended to know more about reproductive health, regardless of their year in school. In this group of women, age and year in school were not necessarily correlated since the universities targeted in this study have an older student body compared to more traditional universities. In the literature, fear was described as a cultural barrier that prevented women from obtaining Pap smears (Lobell 1998; Owusu *et al.* 2005). The women in this study, however, did not mention fear as a barrier and several women actually described not knowing one has an STD as something to be feared.

Recommendations can be drawn from these results at all levels of analysis. At the macro-social level, low SES created financial barriers to access. Any program that can reduce costs to patients will increase access. Encouraging girls under the age of 18 to become vaccinated will ensure increased access as girls this age are covered by VFC programs that provide the vaccine for a total of 36 dollars. Informing women between the ages of 19 and 26 about the Merck program that provides the vaccine at no cost to women who fall within a certain



income bracket will increase financial access to those women. Providing administrative support for women who qualify for Medicaid to enroll also decreases financial barriers.

Implementation of policies at the intermediate level should aim to increase knowledge and access. Policies in health care facilities and at educational institutions need to support the education of patients and students when it comes to reproductive health issues. When these policies already exist, they should be monitored to ensure accurate implementation. Instead of sexual education programs based on fear, stigmatization, and ambivalence about those who have STDs, programs should encourage open discussions on the science of HPV infection and effective prevention strategies (Baer *et al.* 2000). Policies should be applied that encourage health care providers to recommend needed services, such as Pap smears and the HPV vaccine. Although these policies may exist, they may not be implemented due to time constraints, as noted by the clinicians at the Auraria Health Center and Salud Clinic.

At the micro-social level, health care providers should embrace their roles as primary educators. All informants received important information from their physicians and looked to health care providers for advice about reproductive health. Latinas also took recommendations seriously, so clinicians should take the time to inform clients of screening and immunization guidelines. Making a patient comfortable for procedures that are considered personal is imperative, as participants valued having a trusting relationship with providers. Lastly, participants were unlikely to return to a clinic if they had a negative experience with a physician; therefore, strategies to manage the negative experiences of patients must be implemented to encourage patients to return to clinics for further care.

The educational capacity of friends and family entered the model at the individual level. Even though women said that there was little conversation about

sexuality and reproduction with their parents, the family was seen as important source of information concerning health. A program that would support more comprehensive sexuality education within the family should be implemented. The program should be culturally appropriate and consider values or beliefs such as familialism and sexual conservatism. In another Denver study, older Latinas suggested the development of a program to help them teach their children about HIV/AIDS and sexually transmitted diseases (Lucero *et al.* 1996).

The major limitation to this research is that it is not generalizable to the public at large. It pertains in particular to Latinas who face barriers to healthcare in Denver and who have the opportunity to attend one of the three colleges or universities on Auraria campus; therefore, it is only applicable to Latinas with similar experiences. However, this research is not meant to be generalizable, it is meant to gain an in-depth individualized understanding of the knowledge and access Denver Latinas between the ages of 18 and 26 who are university students have to the HPV vaccine.

This information will prove valuable to clinicians and community health workers who want to increase HPV vaccination rates among Latinas ages 18 to 26. Still, a study utilizing qualitative and quantitative methods with a larger number of participants both within and outside of the university setting would make this information more generalizable for other populations of Latinas. The specific aim of this study was to explain and describe knowledge of and access to the HPV vaccine among Latinas ages 19 to 26. The majority of the literature is based on knowledge of and access to other preventive reproductive health services, such as cervical cancer screening and STD screening. Although the barriers and facilitators to these services may be similar to the HPV vaccine, a larger study would have the power to discern which barriers and facilitators are common among these services and which are unique to the HPV vaccine. Research including both Latinas and non-Hispanic whites would be able to

describe barriers to access and knowledge that are unique to Latinas when compared to non-Hispanic whites. Explaining barriers that are distinctive to this population would aid in the development of culturally appropriate interventions.

One topic relating to ethnicity that needs attention is the communication that occurs within the family about reproductive health care. Although women in the study noted “no” to “little” conversation with their parents, they seemed to take advice from their parents about health and spoke extensively with siblings and cousins about sexual health. Another interesting question that came up during this analysis of acculturation was how do women deal with living in two cultures with varying sets of social norms? Latinas in this study seemed to find this situation empowering, so it may be used in interventions to empower Latinas to take action regarding their sexuality and reproductive health. Further, a larger study would be able to more fully explain the interconnections between variables, such as SES, ethnicity, and knowledge of the HPV vaccine. The relationship between knowledge and access is especially interesting and needs to be more fully explored. Even though some women knew about the vaccine, they did not have access. On the other hand, women who were already being immunized did not know why they were receiving the HPV vaccine. Finally, the research articles describing knowledge of HPV were published before the HPV vaccine was FDA approved and before HPV, cervical cancer, and the HPV vaccine were publicized in the media, especially by Merck through their direct to consumer advertising campaign; thus, no research has been published that describes the current knowledge women have regarding HPV and the HPV vaccine.

## APPENDIX A

### Acronyms

ACIP – Advisory Committee on Immunization Practices  
ACOG – American College of Obstetricians and Gynecologists  
AIDS – Acquired immune deficiency syndrome  
BEA – Bureau of Economic Analysis  
CCD – Community College of Denver  
CDC – Centers for Disease Control and Prevention  
CHHS – Colorado Health and Human Services  
CICP – Colorado Indigent Care Program  
FDA – Food and Drug Administration  
HIV – Human immunodeficiency virus  
HPV – Human papillomavirus  
HPV-6 – Human papillomavirus type 6  
HPV-11 – Human papillomavirus type 11  
HPV-16 – Human papillomavirus type 16  
HPV-18 – Human papillomavirus type 18  
LEEP – Loop electrosurgical excision procedure  
MSCD – Metropolitan State College of Denver  
NCHS – National Center for Health Statistics  
NCI – National Cancer Institute  
NHIS – National Health Interview Survey  
NWHIC – National Women’s Health Information Center  
SES – Socioeconomic status  
STD – Sexually transmitted disease  
UCD – University of Colorado Denver  
US – United States  
VFC – Vaccines for Children

## APPENDIX B

### Interview Guide for Key Informants

Tell me about treating STD's in general.  
Would you please tell me about HPV and its risk factors?  
What is its frequency among your clients?  
Do you see it more in some populations?  
Tell me about the HPV vaccine.  
Do you know of any issues that have come up about the vaccine?  
Considering some of the controversy surrounding the HPV vaccine, what is your opinion of it?  
In light of the CDC's guidelines on the HPV vaccine, how has your practice changed or been impacted?  
Who do you recommend the vaccine to?  
What factors affect you recommending or not recommending the vaccine?  
Have there been many people asking about the vaccine? What do they want to know?  
How often do you have patients who require the vaccine?  
Tell me about the people coming in to get the vaccine.  
How does insurance fit into getting the vaccine?  
Tell me about Pap smears at the clinic.  
What are some of the reasons people don't get them?  
Who do you recommend Pap smears to?

Tell me about your experience in treating the Latina population.  
Could you tell me some of the issues that arise treating this population.  
How do language and cultural differences affect treatment?

Tell me how poverty affects healthcare.  
How does the educational level of the patient affect treatment?  
What happens if people don't have health insurance?

What is your highest level of education? Degree?  
What is your job title?  
What is your profession?  
What is your primary functional role at your job?

## APPENDIX C

### Interview Guide for University Students

#### *Reproductive Healthcare in General*

What do you know about reproductive healthcare?

Where did you find out about it?

Have you ever been to the doctor for reproductive healthcare, this includes Pap smears, birth control, STD or HIV testing?

How often do you go to the doctor for reproductive health?

How often do you get screened for STDs?

Which STDs do you get screened for?

Could you tell me what you know about Pap smears?

Have you ever had a Pap smear?

How many have you had?

When was your last one?

How much does a Pap smear cost?

Do you think that is too expensive?

Where did you learn that you needed to get Pap smears?

Do you use any form of birth control?

If you did use birth control, which do you think you would use?

Where do you get it from?

About how much does it cost you each month?

Do you think that is reasonable?

What has been your experience in using birth control?

#### *STDs/HPV*

Please tell me about STDs, what you know about them.

Where did you learn about STDs?

Which STDs are you most concerned about?

What is your biggest fear in getting an STD?

What STDs do you think are most common?

What behaviors are risky for getting STDs?

If you ever got an STD, what do you think you would do?

How would you feel if you ever got an STD?

Tell me what you know about HPV, also known as genital warts.

How you get it, signs and symptoms, how is it treated?

Where did your knowledge about this come from?  
What do you know about cervical cancer?  
Do you know anyone that has had cervical cancer?  
    Tell me about your experience with that.  
    How did you learn about cervical cancer?  
Have you heard of the HPV vaccine?  
What have you heard about it?  
    Where did you hear this?  
    Has your doctor told you anything about it?  
What do you know about vaccines in general?  
Do you think you might get it or have you gotten it?  
Tell me some of the reasons that made you decided this or what do think about it if you've gotten it?  
    If you where to get the HPV vaccine, where would you go to get it?/Where did you go to get it?  
    If you don't have insurance or have certain health insurance, you have to pay for the vaccine out-of-pocket. It costs about 120 dollars per shot, do you think you could still get it?

#### *Access to Healthcare*

Tell me about the last time you went to the doctor.  
    Was it a good experience?  
    Why was it good or bad?  
Have you ever had a bad experience at the doctor or the hospital?  
Where do you go to get reproductive healthcare?  
Where do you usually go to get healthcare when you are sick?  
Do you have health insurance?  
    Could you tell me about the health insurance you have?  
    Are you happy with your insurance and doctors that you now have?  
    Have you been without health insurance for any part of the last year?  
Have you ever not had health insurance?  
    Tell me about not having health insurance.  
    Where did you go to get healthcare?  
    If they have always had it: If you didn't have health insurance, where do you think you would go to get healthcare?  
Do you think getting health services is a problem for you?  
    Why?  
Have you ever delayed going to the doctor?  
    Why?  
Have you ever needed to go to the doctor but haven't?  
    Why?

Where do you get your information about health, medicine, etc.?

### *Ethnicity*

What do you think your race or ethnicity is?

Where were you born?

If born outside of the U.S., how long have you been in the U.S.?

Where were your parents born? Grandparents?

With which culture do you identify with most? U.S., home-country/parent's country, home country-American, all?

In general, what language do you read and speak? Mostly Spanish, more Spanish than English, equal, more English than Spanish, or only English?

What is your religious affiliation?

Has this affected you getting birth control or things like that?

### *Education*

How old are you?

What is your highest level of education?/How many years of school have you had?

What is your major?

What is the highest level of education that you plan to get?

Are you a part-time or full-time student?

### *SES*

What is your current living situation?

How many people live in your household?

What area of town do you live in?

How has your living situation changed in the last three years?

Do you have a job?

What do you do?

About how many hours a week do you work?

About how much do you make in a week?

Are you married or in a serious relationship?

What does your husband/boyfriend do?

What is his level of education?

What do your parents do?

About how much do you think your parents make in a year/month/week?

What is the level of education of your parents?

Do you have any siblings?

What do they do?

What is their level of education?



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